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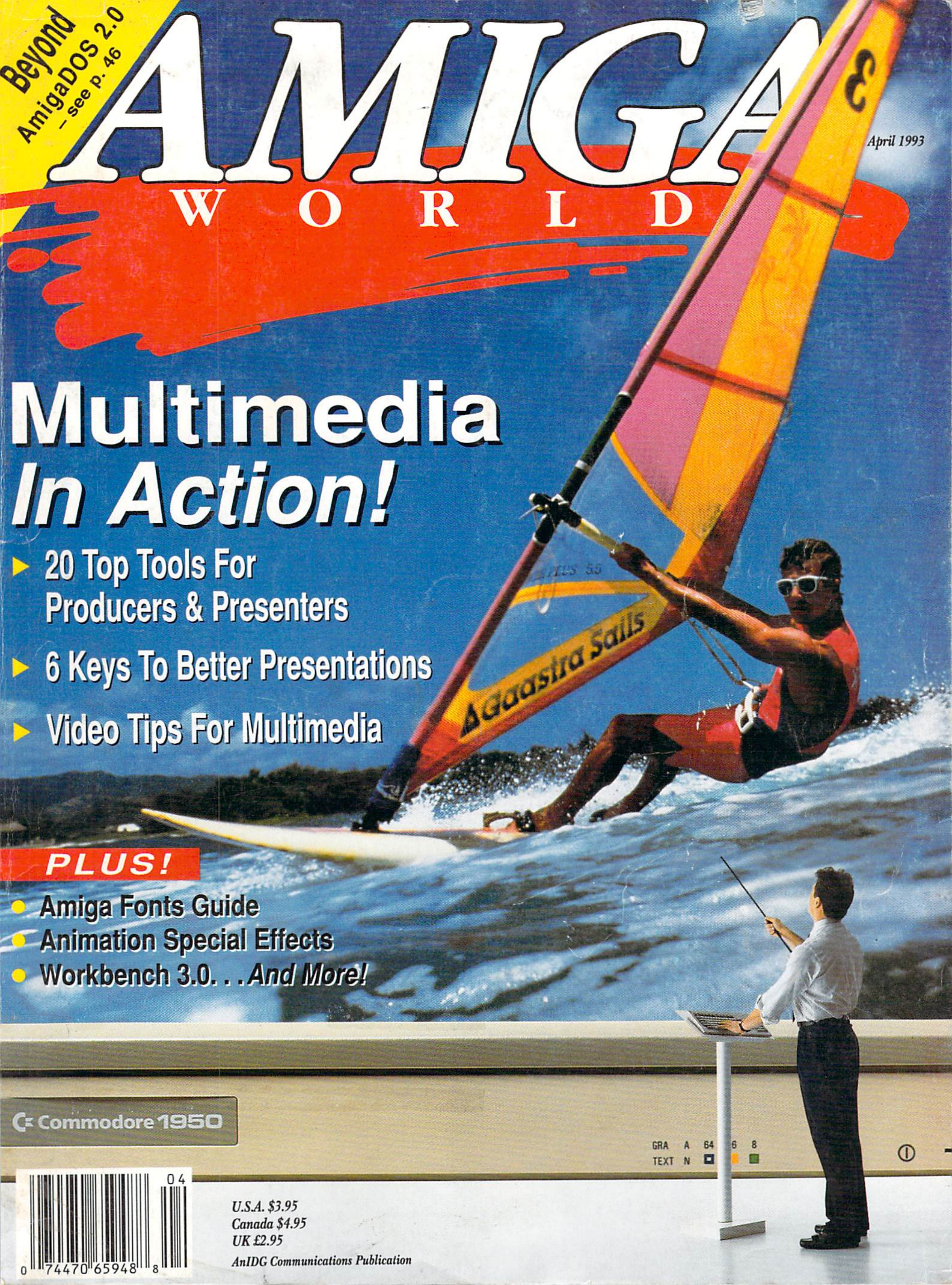
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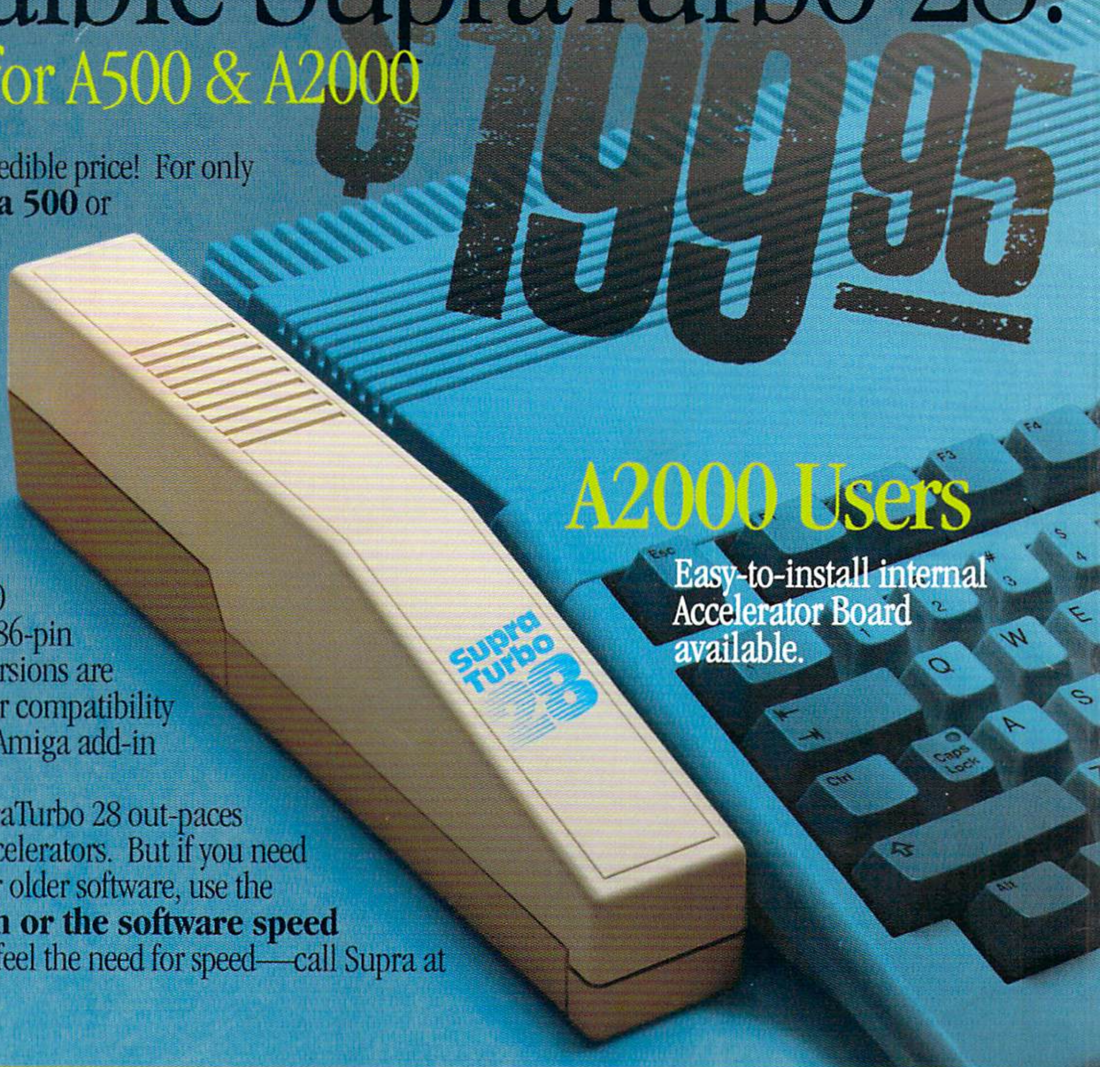
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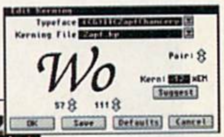
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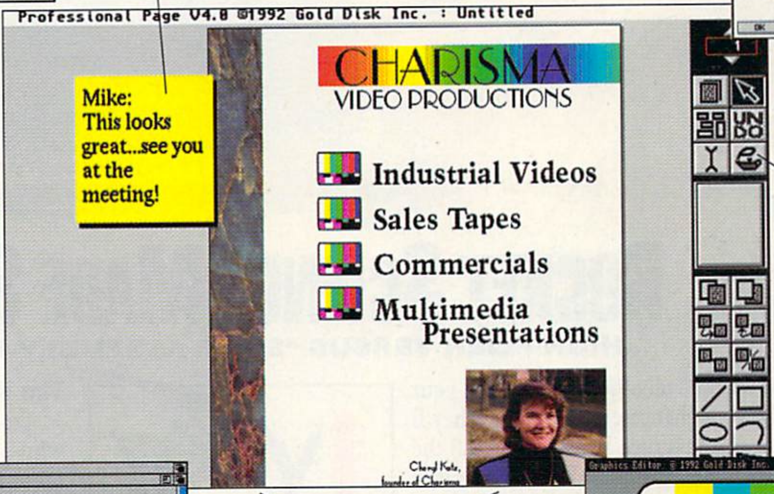
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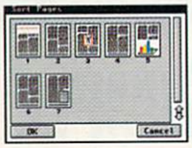
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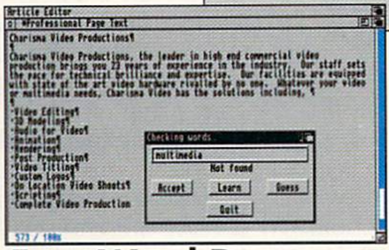
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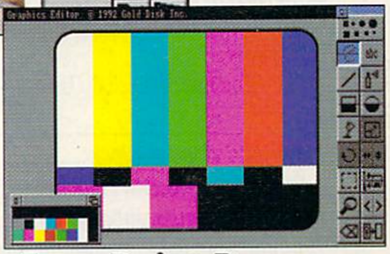


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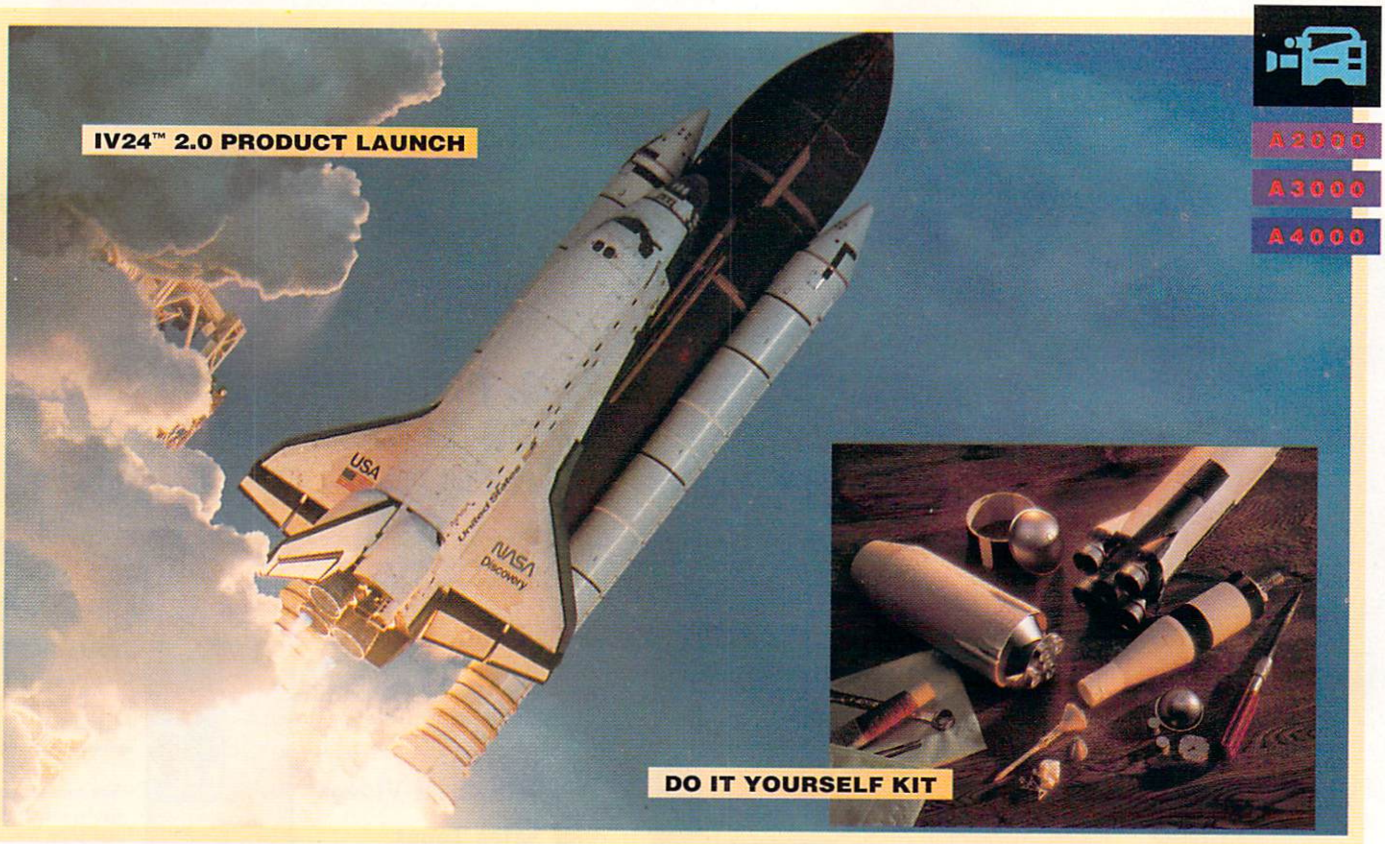


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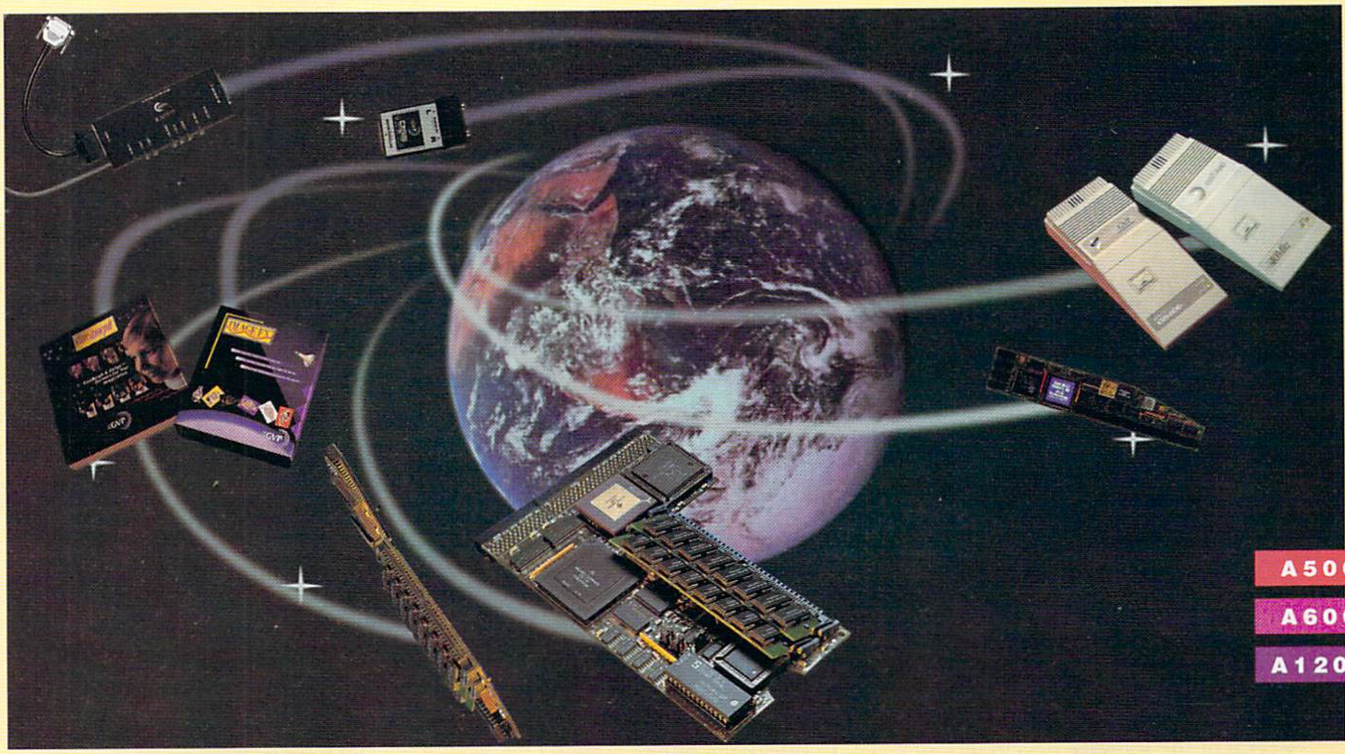
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EDITOR'S DRAWER

To keep the fun in computing, the Amiga games market needs a helping hand from across the water.

IS THE THRILL OF GAMES GONE?

Always an exciting, gadgets-filled adventure, this year's Consumer Electronics Show was a disappointment. While the show offered many new electronic wonders, I had come to Las Vegas seeking *fun*—in the form of games for the Amiga market.

Several of the software developers at CES had nothing to offer except a weak response, "Sorry, we don't have any Amiga titles to show you right now." In years past US software developers rushed to showcase their games in the Amiga market.

I should have been prepared, since we had received calls at the *AmigaWorld* editorial offices from readers concerned about a perceived decline in the number of game titles available. New Amiga games, they complained, were as scarce as real estate on the Strip.

Some industry watchers trace the problem to distribution.

AW games guru, Peter Olafson, notes that "there's no shortage of Amiga games; they're all over the place." Instead, he suggests that with the "crunch on retail space," users would be advised to shop from independent software retailers or a reliable mail-order company for their supply of software.

This situation may change, however, according to Olafson. "Once the 1200 asserts itself in the US, we'll see some of the major developers take notice, as people embrace the 1200 as they do in Europe." He also observed that companies with strong roots in Europe are now entering the US market.

No doubt, the European market is the hotbed of game development for Amigas right now (see *AW's* cover story, Dec.'92, p. 30).

Some companies, like Electronic Innovative Design, have assessed the situation and seized the opportunity. EID, which was launched just last month, is an importer of Amiga games.

The burgeoning import market for native European games is brisk, according to EID's Marcus Marzet. His company anticipates importing at least 10–15 titles each month. Joining forces with UK software developers, Marzet serves as a bridge between what he sees as an oasis of games being developed overseas and desert-like conditions in the US.

"There's nothing wrong with the Amiga platform; it still has a good following in the States," claims Marzet. He hopes that introducing new games—many of them targeted for the AGA machines—into the market will "revive interest" in the Amiga.

Another company with European ties is UK-based Psygnosis. According to marketing manager Phil Sandock, the company is steadfast in its commitment to remain one of the top names in the Amiga game market. "In comparison to the European market, the US market for Amiga games is not as huge, but it still warrants releasing product in the US." He added that the Amiga is sometimes used to develop games, such as Lemmings II. Psygnosis has a half-dozen other products slated for release, including two CDTV products, Dracula and Microcosm, which feature a high level of user interaction and impressive graphics.

Amiga users can expect exciting new games from other companies, notably Readysoft, CyberDreams, and Merit Software, who also plan to continue their commitment to the Amiga games market.

The outlook for that market remains positive, filled with new simulations, arcades, and role-playing adventures. While MS-DOS games dominate the US market, Amiga users and *AW* readers will benefit from an infusion of games from overseas. Amiga gamers can look forward to products marketed through various licensing agreements and under a combination of American and European labels.

While many *AW* readers rate home entertainment as their primary application, games are just one, although a significant, facet of the Amiga. It warrants *AW's* focus on the games market in each issue and our special year-end feature on games. We will continue to scan the seas for products for the Amiga market, as well as monitor the nets to give you the hottest public-domain offerings.

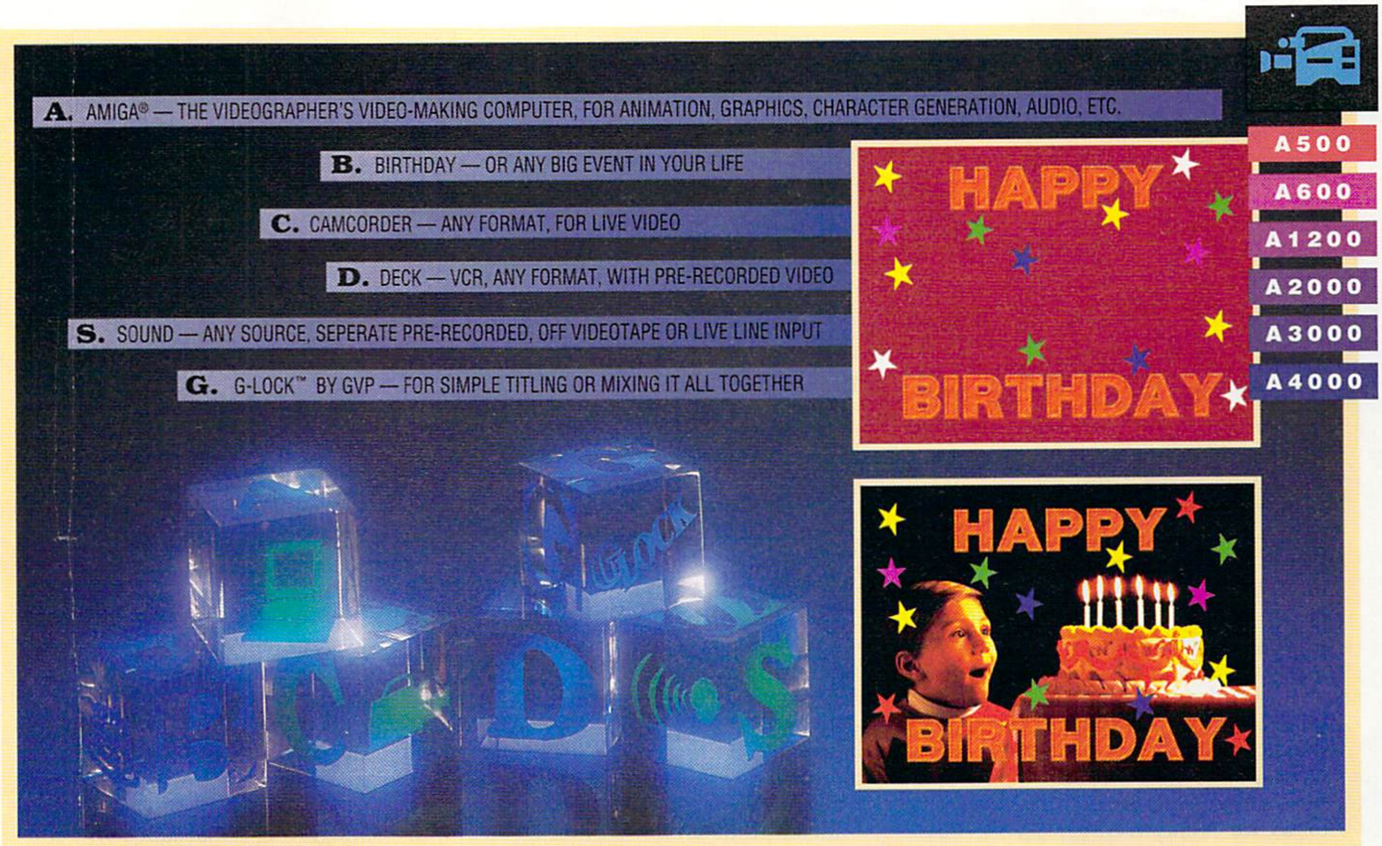
The Amiga has always been highly regarded as a great platform for games. That was the intent of the designers of the machine. And that's your heritage as an Amiga user.

If you think that *game* is just a four-letter word, then it's probably time to trade in your joystick. If you've never experienced the excitement of playing Prince of Persia, or watched animated chessmen duke it out for control of a square in Battle Chess, or manipulated those lovable-but-dumb-Lemmings characters on your Amiga screen, you've missed out on part of the Amiga experience.

So join the action and let the games resume; there's lots more to come!

Dennis Brisson

Dennis Brisson
Editor-in-Chief



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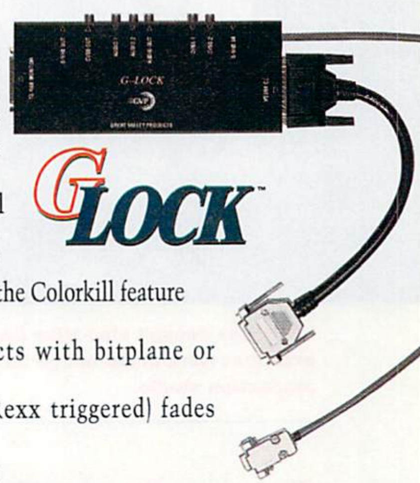
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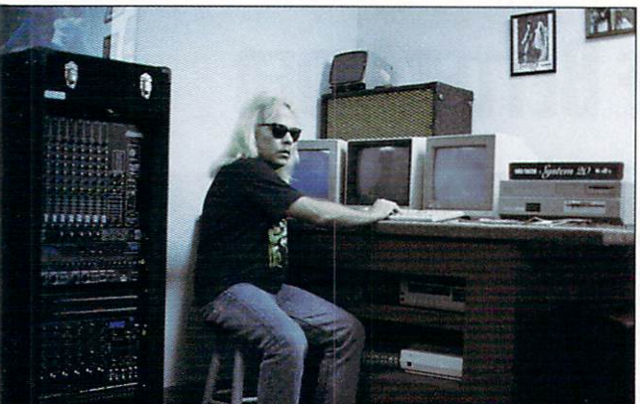
OVERSCAN

News, New Products and Networks

Believing Without Seeing

PENSACOLA, FLORIDA—When you're blind, it takes more than a little *chutzpah* to be an amateur videographer. Be so brazen as to start your own video-production company, and people will think you're nuts. Actually succeed at that endeavor, and you can only be one thing. "I'm a fighter. I was always that way, even before I was blind," says Mike Danger, who is equally at home working an Amiga-driven Video Toaster as he is skydiving. "I've always thought that if you don't think you're any good, no one else will. So I've never let myself think that way."

Inspiring words, for sure. But even the most open-minded sort has to wonder how a blind man can put together music videos that have aired on MTV. How a blind man produces wrestling videos that air on international TV. How a blind man regularly produces commercials for his local TV station.



Blindness doesn't stop Mike Danger from producing excellent work in his Amiga-based audio/video production studio.

Indeed, it all sounds so outrageous: until you realize that 'outrageous' is precisely what defines Mike Danger. This is a man, after all, who wrestles professionally under the handle "Blind-As-A-Batman." He was a world-class skateboarder before he went blind, and now works as front man for a rock-parody group à la Weird Al Yankovich.

It was late in '91 when he decided to open his own video-production company, convinced that NewTek's Video Toaster would set him apart from the pack. Says Rick May, a Pensacola television producer who knows first hand why this human hurricane can pull off the things that he does: "Mike's got the juice."

Of course, there is no question that Danger's blindness presents a formidable technical challenge when he sits down in his studio to put together a production. "It can be a real drag," he says candidly. "You have to spend a lot of time just on concentrating where things are in the room."

But like most entrepreneurs, Danger focuses more on finding solutions than on whining. And, remarkably, he is able to do most of his production work on his own, without help. "A lot of it has to do with memory," Danger says. "I can hear a door slam in a video, and I can picture just where we are in the footage, and what kind of special effect I want to create."

Much of Danger's equipment is touch-coded, so he can feel out the right key or switch he needs to push or throw. When Mike Danger gets stuck, he hires an audio or video person to help handle the particulars. And unlike some other videographers who prefer to cultivate the impression that production equipment is somehow the hallowed realm of 'technomagicians,' Danger has no qualms about bringing his clients into the production process—whenever or wherever necessary—to help him with camera angles, or just ►

Toaster Turns Component

Now you can transform your NewTek Video Toaster into a component (Y/C) system—and get improved video to boot—with **Y/C Plus ($949, *Y/C Plus Inc.*)**.

The full-length board slips into one of your A2000's expansion slots and provides four Y/C-in connectors along with two Y/C-program outputs.

The Y/C inputs convert the Toaster's composite ins to composite outs, thus allowing you to monitor incoming component signals for "live camera switching" and A/B-roll editing purposes.

The Y/C Plus board does not alter composite preview output from the Toaster. And because the Toaster's composite-program output remains active but terminated, you need only hook up a video distribution amplifier to access it.

Y/C Plus accepts S-VHS, Hi8, S-Video, and Y/C signals. You say you want to use a combination of Y/C and composite video in your productions ? No problem. Simply select the type of source you need via jumper plug.

The "Plus" part of Y/C Plus promises to reduce cross color, dot crawl, cross luminance, Moire patterns, and other types of NTSC artifacting, and to impart an overall sharper image. (RS# 120.)

To locate the vendors of products mentioned, see the "Manufacturers'/Distributors' Addresses" list on p. 110.



MUSEUM PIECES

Attain a new status of computer communications while enhancing the value of your Amiga® 2000/3000/4000.

Standalone telecommunications devices are ancient history, because ...

PHONEPAK™ VFX

PhonePak VFX™ handles all the calls

PhonePak VFX™ by GVP turns your Amiga into a professional telecommunications center with integrated voice mail, answering machine and fax messaging options. Think of the possibilities when you can:

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• Capitalize on outgoing fax polling and delay functions, using **PhonePak**'s intuitive, built-in scheduler.

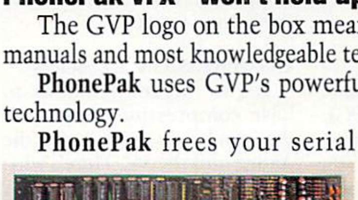
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The GVP logo on the box means the most comprehensive manuals and most knowledgeable tech support in the business.

PhonePak uses GVP's powerful multi-tasking DMA chip technology.

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No other computer-based messaging device packs such utility on any one board, at any price. Integrated, affordable fax, answering machine and voice mail features mean that other telecommunications systems are history.

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For technical information, phone 215·354·9495

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play around with Toaster effects.

Says Geneva Smith, an account executive at Pensacola's WJTC-TV who has seen many of Danger's commercials air on her own station, "Mike is good enough to work for a TV station if he wanted to. I'd suggest his services to any client."

Given the multitude of obstacles Danger is up against, the rest of us must sound like a bunch of weenies when we complain how tough it is to get along in today's world. As you might expect, Danger has little time for that kind of banter. Says he, "I think, as much as anything, getting involved in video has been great therapy for me. When you lose your sight, it can get pretty scary. If you're not using your mind to think in images, it starts to go. Eventually your memory of what things look like starts to erase."

"It got to the point where I forgot what my parents looked like," he says. "I never want that to happen again."

—Joe Dysart

Good CADD for Just a Tad

If you've wished for a lower-cost, 2-D version of DynaCADD (which, developer Ditek says, many folks have), your wish just came true. **DynaCADD 2D** provides all the 2-D capabilities of ***Ditek's*** popular 2-D/3-D design-and-drafting package for a fraction of the price—under $300.

The package includes software versions for accelerated and unaccelerated machines. Features such as on-line help, con- ►

ON-LINE SCAN

By Tim Walsh

Last month I listed some handy archiving programs to ease file-transport woes between Amigas and Macs. This month, archiving between PC and Amiga is the focus.

Past experience once taught me that PCs and Amigas don't mix well. *AmigaWorld* once had a couple of older Bridgeboards, but the upgrade from Workbench 1.2 five years ago proved too much for those wretched contraptions. Label me a quitter because I repeatedly failed to minister to my Janus libraries as cryptic updates were released, but it was easier to forget all that nonsense, yank that rascal out of the A2000, and start using a real PC. Besides, I needed to free up a slot on the Amiga's motherboard.

Today's Special: Canned Ham?

PC machines are just that—machines. When I speak of PCs, I don't think in terms of Bridgeboards or those tiny cards wedged beneath A500s, either. No, *my* idea of a PC is my A4000's roommate—a fast, fully-equipped Tandy 386. Good stuff includes SVGA, PS/2 color monitor, and a fifth-of-a-gig hard drive. (All's not well in Tandyland, though. I'm not sure whether it's by design or defect, but the hard-drive mechanism, as one imaginative caller put it, "...sounds like a hog stuck in a trash compactor." She was commenting on the rapidfire grunts she heard in the background as the machine struggled through a database. Odd.)

While PC emulators are needed to run executables on your Amiga, they are not necessary for sharing files between the two platforms. As with the Mac, the lines of distinction between PC and Amiga files have become so blurred as to be almost indiscernible. For that reason, a knowledge of archiving formats shared between the PC and the Amiga can make life more pleasant.

The roots of your Amiga's most popular archiving formats—Lharc, Zip, and Zoo—can be traced directly to the PC. Virtually all the documentation for these popular compression techniques begins with a nod of acknowledgement to the MS-DOS programmers who originally designed them in return for permission to distribute their Amiga ports.

Compression Lessons

It's so incredibly handy to have compression techniques that can be shared between the Amiga and the PC. Here's why: Let's suppose your co-worker has an MS-DOS machine and has just copied ten JPEG and two GIF graphic files from some high-density (1.44 meg) floppies onto its hard drive. It's 11:45 AM in the morning, and he asks you to get them on his Amiga for image processing before noon. The two machines are not connected in any way.

You'll need to copy the files to a double-density 720K MS-DOS formatted disk (the only type of PC format the Amiga can read). The directory reveals the JPEG files will fill one-and-a-half such disks, and there's room for only one GIF per disk. It's now 11:47. So you fire up the PKZip archiving utility on the PC and compress the ten JPEG images into one 500K or 600K file. Repeat the process with the two GIFs and you'll have a 500K to 700K file, still small enough for a 720K disk. The clock now reads 11:53.

Next, copy the PKZip-compressed file containing the JPEG images to the first low-density PC formatted disk and the similarly compressed GIF file to the second disk. Run a PC utility such as CrossDOS or MultiDOS on the Amiga, and launch PKaZip, the Amiga's version of the same archiver. Pop the disk containing the JPEG files into the floppy drive, select the source and destination devices, then let PKaZip do its unzipping thing. It's now 11:57.

Repeat the above process with the disk containing the GIF images. At 11:59, having finished the job, you nonchalantly stroll into your co-worker's office with the good news. But it's too late...he's already left for lunch.

The Wherefore

With flatbed scanners becoming all the rage in the computing business, the above scenario is becoming commonplace. In fact, it's a variation of a reoccurring event in my office. Just knowing that the compression techniques are transportable between the Amiga and the PC is the only secret. You don't have to use PKZip, either, as the above example would work just as well with Lharc or Zoo, so long as you have versions for both machines. A number of alternative ways exist to transport these graphic files, as well, using null modems and Syquest drives. However, experience has taught me the above method is best, mainly because it's the quickest and least expensive way to move from the PC to the Amiga and vice versa.

Finding these files on the nets, whether it be BIX, CompuServe, GEnie, or Portal, is effortless. Just go to one of the archiving/compression sections within the IBM/PC areas and search on the keywords Lha, Zoo, or Zip. For reference purposes, the latest PC versions of Lharc hovers around 2.13; for Zoo it's 2.10.

A word of caution: If you have a PKZip file that won't decompress on your Amiga, chances are good it was created on a PC using PKZip version 2.04c. This January '93 shareware release from PKWare creates files that you'll have to unzip on a PC, then copy to the Amiga after the fact. All earlier versions of Zip seemingly offer 100% Amiga compatibility. But, maybe by the time you read this, the Amiga's PKaZip will have been updated...

Here are voice numbers for the major networks in case you're not yet on line. Until next month, happy squeezin'!

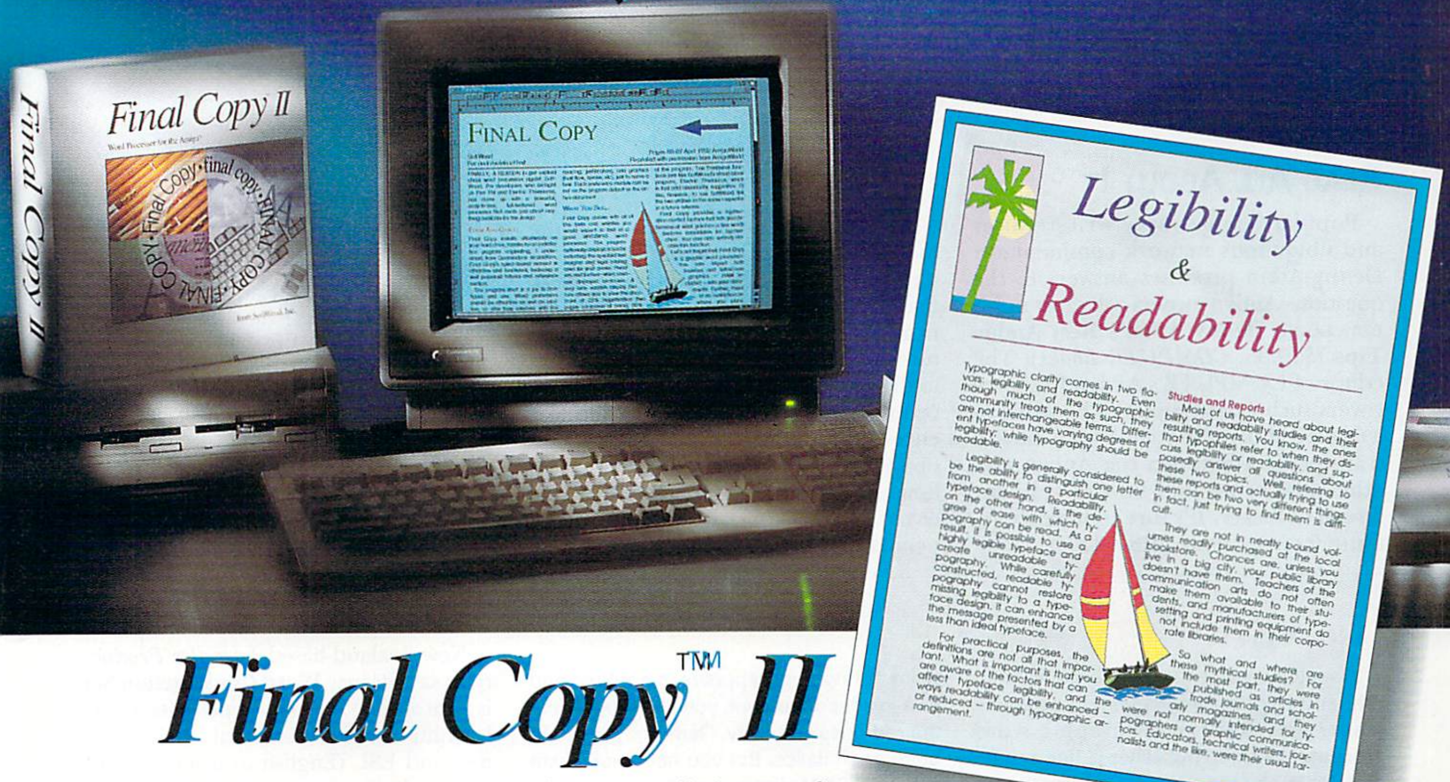
BIX
800/695-4882
617/354-4137

CompuServe
614/457-0802
800/848-8199

GEnie
800/638-9636

Portal Communications
408/973-9111 □

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Final Copy™ II

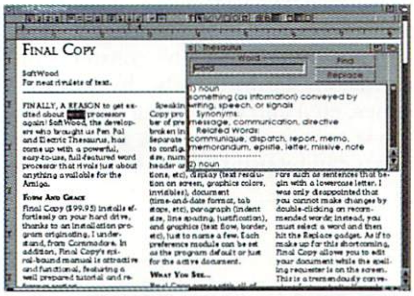
Final Copy II produces high quality, professional looking documents. It combines advanced word processing features, easy-to-use page layout capabilities, and state-of-the-art printing technology into one convenient program.

While other programs claim to have quality printing, Final Copy II is the only word processor on the Amiga that will produce excellent quality printouts on any Workbench (1.3, 2.0 or higher) supported graphic printer. If you have a PostScript printer, Final Copy II is the only word processor on the Amiga that has true WYSIWYG PostScript print capabilities - other programs limit you to a few fonts and a limited number of sizes. With Final Copy II you get the same great looking output produced in expensive desktop publishing programs.

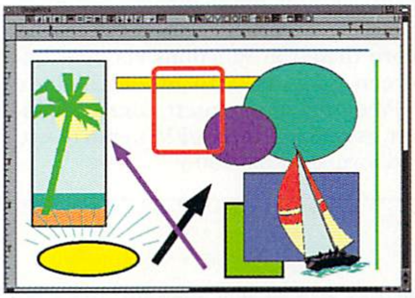
Final Copy II's word processing features include: 144,000 word speller; 1.4 million response thesaurus; automatic hyphenation; named paragraph style sheets; master pages; mail-merge; multiple newspaper style columns; search and replace; header and footer support; left, right, center and decimal tabs; paragraph justification; and automatic date, time, and page number insertion.

Final Copy II's graphic features include: object-oriented, structured tools for drawing boxes, ovals, lines, arrow-tipped lines, and rounded cornered boxes; cropping; graphic sizing; object locking; and graphic depth arranging.

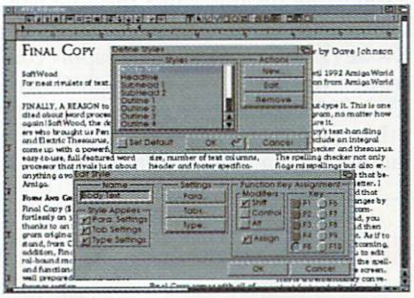
Say good-bye to jagged-edged printouts. Your documents will look more polished and professional than ever before. Final Copy II is an excellent investment for your software library.



You want a document that reads well in addition to looking good. Final Copy™ comes with a 144,000 word speller, 1.4 million word thesaurus with definitions, master pages, style sheets, paragraph sorting, math support, mail-merge, automatic hyphenation, and user-defined tab stops to assist you in your writing.



Final Copy's™ graphic support is the best there is in any Amiga® word processor. Place IFF ILBM pictures and brushes anywhere in a document. Draw boxes, ovals, lines, arrows, squares, and circles using Final Copy's™ structured drawing tools. Flow text around or on top of any graphic in a document.



Style sheets and master pages are features you can really use to ensure your documents are created in a consistent and well-planned manner. Fully editable page views let you work in several levels of reduction and magnification. Multiple snaking columns, left/right pages, and title page options are easy to use.

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System Requirements: Amiga® with at least 1 megabyte of RAM and either a hard drive or 2 floppy drives.

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text-sensitive documentation, and a well-organized, graphical interface should make DynaCADD 2D easy to learn and use. The program promises to send accurate data representing all or any portion of a drawing at any scale (including best fit) to "all popular" pen plotters, printers (be they dot-matrix, laser, or PostScript), and disk files. DynaCADD's MAKEPLOT utility lets you create or change any plotter driver, and its full Vector Font Editor lets you create or alter characters and fonts. (RS# 135.)

Read All About It

Popular Amiga-savvy writer/editor and ubiquitous network commentator Denny Atkin promises answers to the questions Amiga owners ask most in his new book, **Denny Atkin's Best Amiga Tips** ($19.95, ***COMPUTE Books***). The editor of COMPUTE's Amiga Resource covers such varied topics as how to add a CD-ROM drive to your system, how to transfer data between the Amiga and other platforms, and how to rid your screen of flicker. It's sure to have something for everybody. (RS# 127.)

If your knowledge requirements are more specific—say, centering on the Amiga 600—then put **The Insider Guide to the Amiga 600** on your reading list. New from ***Bruce Smith Books***, the volume features 55 sets of step-by-step instructions to the most important and common procedures. Workbench, utilities, Preferences, and AmigaDOS are all touched upon. The book promises to show you how to configure your machine for your own way of working, and includes an appendix for quick reference. (RS# 128.)



Overheard

Programmers, beware. New York City lawfirm Pennie & Edmonds (212/790-9090), which specializes in software copyright and patent law, recently informed *AmigaWorld* of a case that could affect you if you do any programming professionally.

The case involved Clifford Ames, who was hired by Island Swimming Sales on a free-lance basis to write software for tracking inventory and cash flow. While a lower court awarded the copyright to the programmer, the Second US Circuit Court of Appeals overturned the earlier decision and favored the corporation.

Therefore, one more time: Programmers, beware.

Write With a Twist

Want to combine the Greek, Arabic, English, and Hebrew languages in one document? The **Rashumon** graphic word processor/desktop publisher ($180) can do it! But that, and the program's ability to support multiple fonts (up to 99 pixels high) and proportional spacing (to 256 pixels wide), is only the beginning.

Rashumon, from Israeli company ***HarmonySoft***, specializes in unusual features. For instance, you can highlight separate parts of text in your document and manipulate them all at once. You can also perform color-sensitive searches, so if the word "strawberry" appears in both red and pink in your document, you can replace just the red ones with, say, "lemon," printed in bold green italics. But you need not waste time and RAM displaying all those colors; switching to monochrome mode lets you double your working speed.

In fact, Rashumon promises to excel as a text editor, unlike most resource-hungry graphic word processors. HarmonySoft says it provides superior editing and scrolling speed, and even lets you import ASCII files directly from PC format. (RS# 137.)

Frame Accuracy in Every Studio

Want frame-accurate video editing without investing a fortune? ***Ron D. Richardson*** promises just this. No controller card is necessary; Richardson's **Evoke** ($99) is a software transport controller designed for use with Sony's EVO-9650 VCR and an Amiga. The only other requirements are a composite monitor and a null-modem cable.

Extensive error checking is provided to keep everything on track, and the feedback edit point display promises complete accuracy. You get access to more than 135 functions via 70+ onscreen gadgets. Edit modes include PCM digital stereo insert, time-code insert, assemble, video A/FM stereo insert, and format. (RS# 130.)

Applied Phonics

New Zealand-based ***Lascelles Productions*** says its new **Word Construction Set** is appropriate for many types of students learning English: remedial, early reading, and ESL (English as a second language). It encompasses more than 1000 words, which the student builds by word and sound parts or by using phonograms.

The program "speaks" a word (using Amiga sound) in the context of a sentence that is displayed on screen. A graphic depicting the word also appears. The student assembles the word from beginning, middle, and ending sounded parts, then tests the result in a sentence. Learning takes place as students recognize the word, letter, and sound patterns, and as they take cues from context and visuals. The software promises to clarify confusing sound patterns along the way.

Progress is measured by the successful construction of seven "building sites," each representing different ways of approaching words (by consonantal sounds, by compounds, by homophones, etc.) and each being built visually via an animated crane. Individual reports can be printed. (RS# 121.)

Socket To Me, Joe Cool

Want to leave yourself a little elbow room while adding the ability to switch between AmigaDOS 1.3 and 2.0? ***Better Concepts*** offers a solution: **Qwicka-Switcha** ($39.95). The miniature board plugs into your motherboard's ROM connector and provides sockets for 1.3 and 2.0 ROMs—so that you can switch between modes to retain compatibility with all your software. That's not all: Two additional sockets are provided to accommodate whatever the future may hold.

Another hardware utility can help extend the life of your CPU by maintaining a flow of air in and out of your computer case to keep the inside cool and dust-free. Developer ***Better Concepts*** promises its **Kool-It** ($39.95) micro fan kit will substantially reduce the operating temperature of your Amiga's custom chips and other internal parts, and thus head off the need for costly repair. If it's true that most system failure and chip burnout is caused by overheating, this may be a wise investment. (RS# 122.)

WHEREFORE ART THOU, *HOMEO?*

CDTV owners, if you have any questions regarding homeopathic medicine, **HomeoCD** ($60) is the answer. Developed by the ***Homepathic Medical Association of Canada*** (HMAC), the CD-based program provides a self-medication guide, describing the most common pathologies and advising on the use of appropriate homeopathic medications.

An introduction to homeopathy, a repertory (including a veterinary section), a "materia medica," and a lexicon of terms are among the offerings of the interactive guide. In addition to 80 illustrations and 170 explanations of remedies, the disc promises more than 500 recommendations in simple and precise language. And speaking of language, you can choose between English and French when you boot up.

Geared toward family use—as a complement to a physician's advice—the program can also be helpful in schools and professional situations. Its aim is, according to HMAC president Dr. Claude Harvey, to increase awareness of homeopathy "as the main alternative medicine; gentle, natural, and with no side effects." (RS# 123.)

LIKE A LASER

SeaWorld does it. Lawrence Livermore Labs does it. Even PC developer Corel Corporation does it. Now you can do it, too: You can create laser-light shows using the Amiga. How? With **Lasershow Designer**.

Developer ***Pangolin Laser Software*** is quick to point out that the Amiga is the only computer capable of directly controlling laser-show projectors. It's done using the audio outputs: Graphics become digitized waveforms, which play through the Amiga's Paula chip. Instead of hearing sound, you see it.

The hardware part of Lasershow Designer, the QuadMod8 board, incorporates a reverse-engineered Paula chip, which promises all the Paula's capabilities plus four separated sound channels (three 16-bit and one 8-bit) for driving laser projectors.

The Lasershow software comprises a draw program with CAD-like 3-D extensions, a library of assembly-language instructions (the laser is "just another device" to the Amiga), and even a laser-projected game.

Pricing for various versions of the package runs from $595 (for hobbyist use) to $7995. Of course, for full effect you need a laser projector as well. (RS# 124.)

LIGHTS UP!

Whether you need to control vast lighting rigs for a professional theater or you have more modest lighting-control requirements, a version of the **Aladdin Lighting Control System** (***Phoenix MicroTechnologies***) is on cue to help. A hardware-software combo, this Australian product promises power and sophistication enough to meet or exceed the capabilitles of dedicated consoles costing much more. What's more, it can integrate with big-name consoles as a backup or as an additional effects generator.

Phoenix MicroTechnologies assures simple programming, on-line help, and ease of use even for novices. Features and functions include 48 channels, multiple automatic and manual crossfades, proportional softpatch with individual curve assignment, and more.

The hardware comprises a full-length card for the A2000 or A3000. The package supports both the ARexx and MIDI protocols, meaning you can control your lighting via other software or via MIDI keyboards, instruments, and sequencers. This also means you can control more than one Aladdin system at a time for unlimited channel capacity. Futhermore, you can trigger the system using common cordless telephones for remote interaction without reliance on line-of-sight infrared technology. (RS# 126.)

OVERHEARD

Have you produced a hip-looking graphic demo using an AGA machine (A1200 or A4000)? If you want to make it public domain, Hip Computing wants to distribute it to dealers across North America to promote the new Amigas.

Whether it's a simple HAM8 slide show or a full-blown animation with sound, your production will fit the bill as long as it: runs on a standard A1200 with 40MB hard drive; mentions the Amiga in some way; lists the softwre used in creation; is hard-drive installable; is "family viewable."

Send your demo disk along with your name and address to: An Amiga In Every Home, c/o Zoltan Hunt, RR #2, Beeton, Ont., Canada L0G 1A0. Dealers wishing to be on the mailing list can write to this address as well.

SHINE ON

Want to add a little shine to your desktop-published documents? ***Allied Studios*** announces **Hot Foil Effects**, in six solid metallic colors ($12 for each 8x30-inch sheet) and silver holographic patterns ($15 for an 8x20-inch piece). Each package can spot-color 400 average letterheads. You can use the product with any printer that accepts heavy-weight or card stock simply by running your page through the printer a second time. (RS# 129.)

CD FOR YOURSELF

Turbo Technologies' sub-$300 **Turbo Duo** isn't just a CD-ROM game machine; it can play any High Sierra or ISO 9660 formatted CD-ROM discs. And while it's sold as a stand-alone machine, Turbo Technologies' new **Intelligent Link** adapter turns it into a SCSI peripheral for your computer.

Turbo Duo has a 256K RAM buffer and comes bundled with more than $250 worth of games and discount coupons. The Intelligent Link adapter is scheduled to retail for less than $100. (RS# 125.)

Send news, new products, and network information to Overscan, *AmigaWorld* Editorial, 80 Elm St., Peterborough, NH 03458. ■

OpalVision

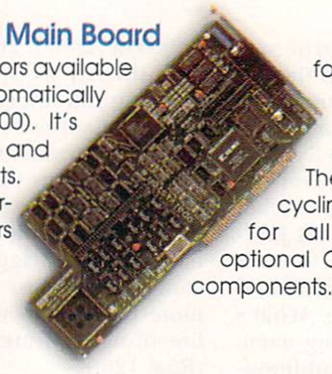
"Awesome, Spectacular, Amazing, Brilliant, Wonderful"

Choose any positive adjective and chances are it's already been used by both critics and consumers to describe OpalVision and OpalPaint—the most professional 24-bit power you've ever seen!

And now, Centaur Development and Opal Technology, whose dedication to excellence created OpalVision and OpalPaint, are pleased to give you complete details on all of the OpalVision modules...

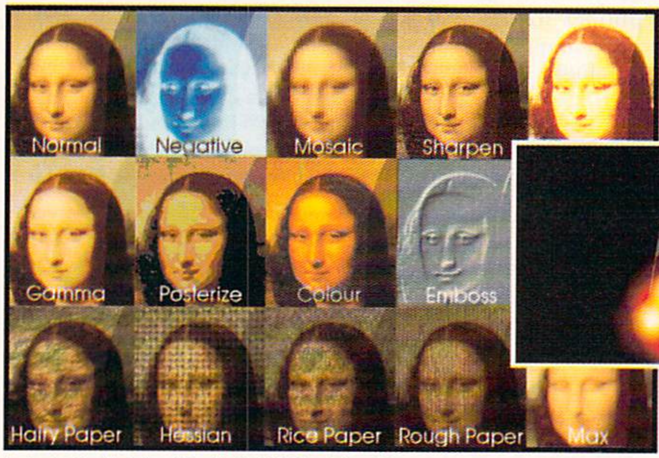
OpalVision's state-of-the-art modular design gives you unequalled versatility. Start with the OpalVision Main Board and included software. Then easily add additional modules if you require more capabilities, spending only what you need to get the results you need. Each of the modules fully integrates to create a seamless system.

The OpalVision Main Board



A true 24-Bit frame buffer and display device with 16.8 million colors available for every pixel and a maximum resolution of 768 x 480 (580 PAL). An internal card, it operates automatically in NTSC or PAL mode in any Amiga computer with a video slot (including the Amiga 4000). It's powerful VLSI graphics coprocessor enables stencil modes, a host of transition effects and smooth, hardware-controlled priority switching and scrolling/panning effects. The board's state-of-the-art design allows smooth fading of pictures, color-cycling effects, and smooth, double-buffered 24-Bit animation. Includes connectors for all of the optional OpalVision components.

MAIN BOARD AVAILABLE NOW





Includes OpalPaint and OpalAnimMATE for state-of-the art painting and 24-bit animation.

Included Software:

- **OpalPaint V 2.0 -** 32-Bit painting and image processing.
- **OpalAnimMATE V 2.0 -** 8, 12, 15, 18 and 24-Bit animations from frame sequences.
- **Imagine V 2.0 -** Award-winning 3D renderer and animation software.
- **Opal Presents! -** Comprehensive, icon-driven presentation package.
- **Opal HotKey V 2.0 -** Display OpalVision graphics anytime with key combinations.
- **Miscellaneous Utility software**

Inputs/Outputs:

- **RGB output via standard Amiga DB-23 connector**
- **Compatible with most external genlocks**



The OpalVision Video Processor

Plug this card into the OpalVision Main Board and add a wealth of additional features and functionality. It's a high-quality, real-time 24-Bit framegrabber which doesn't require a time-base corrector. And, it's a professional-quality genlocker with chroma and luma keying. The 256-level linear transparency key allows the definition of transparency between two live video sources on a pixel-by-pixel basis for smooth vignettes, anti-aliased text and super-smooth effects. Video Sandwich key allows you to insert chroma or luma keyed video between definable foreground and background layers of a 24-Bit image. It also provides real-time color processing of live video and an unlimited number of transitions and Digital Video Effects using the included OpalVision Roaster Chip and software. These include cuts, wipes, fades, and special organic effects (soft- or hard-edged), plus an infinite range of flips, tumbles, picture-in-picture, page peels and image wrapping.

- **24-bit real-time framegrabbing from composite or S-Video.**
- **Professional quality genlocking.**
- **Real-time, live-video color processing and chrominance effects**
- **High-quality Digital Video Effects**



Alpha Channel functions with OpalPaint and with the Video Processor for transparency overlays.

New Features:

- **Now includes powerful, VLSI microcode processor "Roaster Chip" for Digital Video Effects of unequalled quality.**
- **Luminance keying with definable upper and lower levels**
- **Chroma keying on any color range**
- **256-level "Alpha Channel" (transparency) key.**
- **24-bit, 35ns character generation software**
- **24-Bit Picture-in-Picture and Video Sandwich Keying**

Included Software:

- **Opal Character Generator • Special Effects Manager**
- **OpalVision System Software**

Inputs/Outputs:

- **1 Composite in/out**
- **1S-Video in/out (S-VHS, HI-8, Y/C)**
- **1 expansion connector for Video Suite**
- **1RGB out via DB-23 connector**

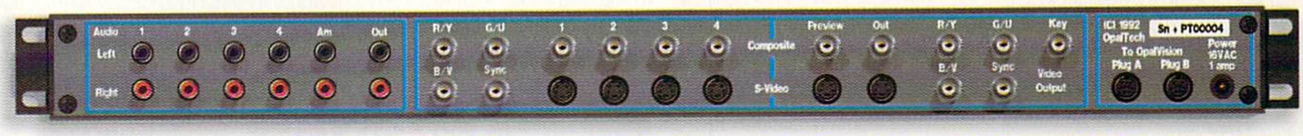
Modules Available Spring '93

The OpalVision Video Suite

A power-packed video and audio mixing, switching, and transcoding device. This 19-inch, rack mountable unit is so advanced that it has its own internal computer and every aspect is software-controlled for precisely timed and accurate functionality. The Video Suite includes a wealth of inputs and outputs. There are 9 Video and 10 Audio inputs available, plus the 24-bit frame store. Professional quality video inputs and outputs are available simultaneously in RGB or Y/R-Y/B-Y, Composite and S-Video. Choose any 2 sources from these inputs, assign a transition or special effect, and then trigger it manually or automatically. All of the transitions and effects provided by the OpalVision Video Processor are available for use by the Video Suite.



A,B and Preview display LED **Audio Level VU meters**



Audio Inputs | **Sound F/X or 5th Audio input** | **Stereo output** | **RGB or Y/R-Y/B-Y inputs and master sync input** | **4 Composite and 4 S-Video inputs** | **Preview composite and S-Video outputs** | **Main composite and S-Video outputs** | **Main RGB or Y/R-Y/B-Y and sync outputs** | **Key in/out** | **OpalVision input/ output** | **Power Connector**

The linear transparency key (Alpha channel and transparency effects) can be taken from the Video Processor or an external video source, and/or output to another production switcher. This allows transparency control between 2 video sources on a pixel by pixel basis. The 10 Audio inputs (5 stereo pairs) are fully software sequenced with smooth fades and full, 5-band stereo frequency equalization.

Video Inputs:
(All available simultaneously)

- **4 composite inputs (8 composite inputs if S-Video inputs are used as composite)**
- **4 S-Video inputs (S-VHS, Hi-8 or Y/C)**
- **1 or 2 RGB or Y/R-Y/B-Y inputs (2nd source uses the 4 composite inputs)**
- **1 master sync input (master sync can be selected from any video source)**
- **1 infinite level linear transparency key**

Video Outputs:

- **1 composite main output**
- **1 S-Video main Output**
- **1 RGB or Y/R-Y/B-Y main output**
- **1 linear transparency key**
- **1 composite preview (automatically transcodes composite & S-Video)**
- **1 S-Video preview**

Audio:

- **Inputs: 10 mono or 5 stereo pairs**
- **Output: Stereo with 5-band equalizer and VU meters**

OpalVision Scan-Rate Convertor

Add this card to the OpalVision Main Board and achieve 31kHz, non-interlaced output of Amiga graphics, OpalVision images and any incoming source in either PAL or NTSC. And we've added full time-base correction of incoming video. Time base correctors are used to synchronize two non-synchronized video signals, or for cleaning up the timing of a "dirty" video signal. The on-board memory also serves as a separate frame-store for dual framebuffer applications.

- **Converts interlaced PAL and NTSC to 31kHz non-interlaced, flicker-free display.**
- **Plugs into the OpalVision Main Board. No external power supply needed.**
- **Works with any multi-sync/multi-scan monitor.**

New Features:

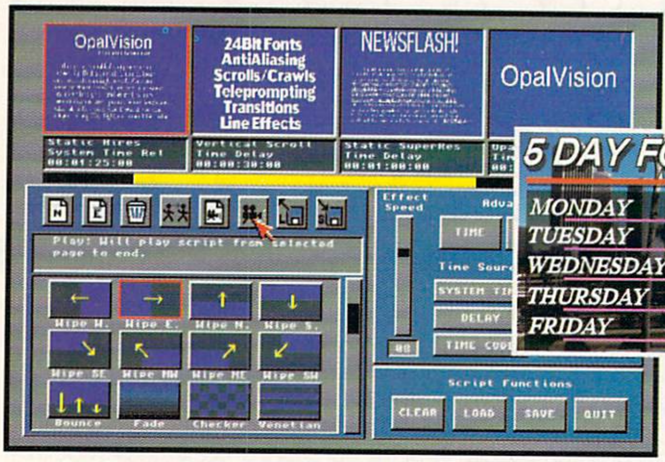
- **Includes full, infinite window Time Base Correction operates in RGB for superior quality**

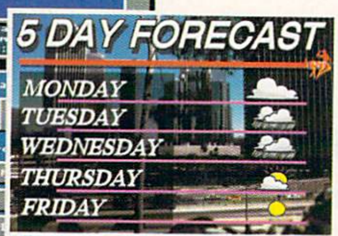
Amiga
2000
3000
4000



OpalPaint's intuitive, versatile palette control panel.

Typical OpalVision Configurations





Opal Character Generator provides 35ns, professional-quality video titling.

OpalVision Video Effects, Digitizing and Titling Workstation

Add the OpalVision Video Processor board to add new worlds of video capabilities to the system. Grab frames from live video. Modify them in OpalPaint, add titles, color processing and real-time chrominance effects, output to video tape, use the powerful "Roaster Chip" for real-time Digital video effects to transform one incoming video signal in composite or S-VHS format.

Applications:
Animation Overlays
Video Titling
Video Processing and color correction
Digital Video Effects
Multimedia Applications
Simpler Video productions of any sort

To achieve 31kHz non-interlaced output and time-base correction of incoming video, you can add the OpalVision Scan-Rate convertor. And you can always obtain third party software or hardware (like Art Department Professional or a pressure-sensitive tablet) for additional functionality.

OpalVision Paint and Animation Station:

Put an OpalVision Main Board in your Amiga and you've upgraded your system to include complete 24-bit functionality.

- **The best available 24-Bit paint and graphics software**
- **Works with all important Amiga graphics software including Art Department, Imagine, ImageMaster, Morph Plus, Aladdin, Caligari, Real 3D, and more.**
- **Supports pressure sensitive input tablets.**
- **Mixes Amiga and OpalVision graphics and animations simultaneously.**

Included software:

- **OpalPaint V 2.0 for 32-Bit painting and image-processing**
- **OpalPresents! for professional-quality 24-Bit presentations.**
- **OpalAnimMATE V 2.0 for full 24-bit animation creation and playback**
- **Imagine 2.0 (for a limited time) for 3D rendering of graphics and animations**

Applications:

Graphic Artists	**Multimedia**	**Education**
Fine Artists	**Animators**	**Designers**
Videographers	**Desktop Publishing**	**Hobbyists**

This set-up can also be enhanced through the use of third party software and hardware. Add a 24-Bit scanner to import hard-copy color images for applications like photo-retouching and image enhancing. Add the OpalVision Scan-Rate convertor for de-interlaced output. Use third party Amiga-compatible genlocks for simple video applications. Or, include a pressure-sensitive tablet with your system for unrivalled artistic creativity.



Chrominance effects for real-time control of image palettes, contrast, brilliance and color re-mapping.

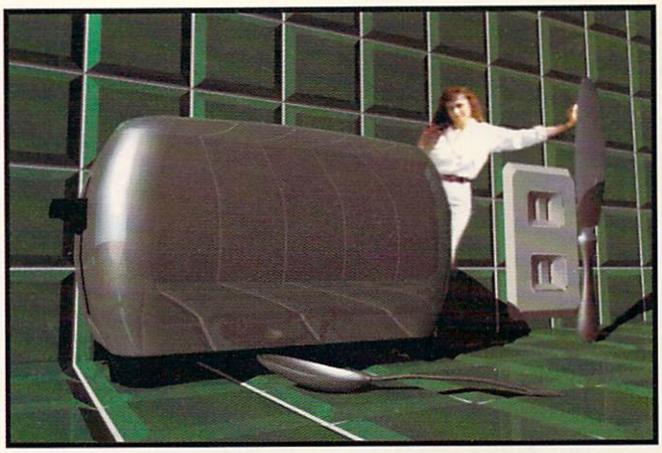
OpalVision Desktop Video System

After installing the Video Processor board, you can greatly increase your input and output capabilities by adding the OpalVision Video Suite. Perform cuts, fades, wipes and DVE's between any two sources selected from nine available inputs. We've also added full mono and stereo audio mixing.

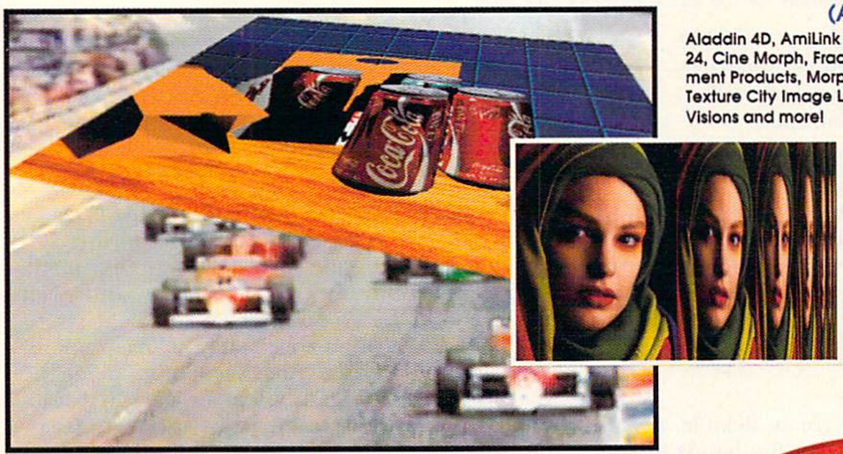
Applications:
Professional Video Production
Wedding, industrial and educational videos
Audio dubbing and mixing, sound effects
Cable and Professional Television production
Multimedia Presentations
Home video production

Modularity equals Versatility

If your need 31kHz (non-interlaced) output or time base correcting, you can add an OpalVision Scan-Rate Convertor to complete your system.



Video Sandwich keys puts chroma- or luma-keyed video between 24-Bit layers.



OpalRoasterChip creates unlimited Digital Video Effects and Transitions.

Video Performance

Video Input Standards
(User selectable): .... NTSC, NTSC 4.4, PAL, SECAM
Video Output Standards: .... NTSC, NTSC 4.4, PAL
RGB output Bandwidth .... >7 MHz
Composite (Luma) Bandwidth .... 4.5 MHz typical
S-Video Bandwidth .... 5.5 MHz typical
Hue Control .... +30 to -30 degrees
Video lock jitter .... <15ns
Horizontal position adjust .... -320 to +1000 ns
Horizontal lock range .... +/- 1200Hz typical
Subcarrier lock range .... +/- 350Hz minimum
Linear Keyer input speed .... >7 MHz

Audio Performance

Audio Inputs . 10 inputs (5 left, 5 right) line level 20k ohms
Audio Outputs .. 2 outputs (Left, Right) line level 70 ohms
Input Mode .... Differential for very low noise.
Frequency Response .... 20Hz - >20kHz
Frequency Equalization points 59 Hz, 205 Hz, 790 Hz, 2.95 kHz, 12 kHz
Equalization Range .... +/- 15db
Total Harmonic Distortion .... 0.05 % typical.
Mixing level control ... 0 to -70db (independent software controlled DAC's)
VU meters .... 10 steps -20db to +3db range.

Third Party OpalVision Software
(Available now or coming soon!)

Aladdin 4D, AmiLink Video Editing Products, Art Department Professional, Caligari 24, Cine Morph, Fractel Pro, Image FX, ImageMaster, Imagine, Michtron Entertainment Products, Morph Plus, Real 3D, Scala InfoChannel, Scala MultiMedia 200, Texture City Image Libraries, 3D Professional, Transporter, TV Paint, Vista Pro, Video Visions and more!

OpalVision Distributors

Canada: B.M.D., Woodstock, Ontario Ph:(519) 539-0200 Fax:(519) 539-9725
Denmark: Scala Computer TV, Herlev Ph:44 53 11 77 Fax:44 53 11 73
France: CIS, Pessac Ph:56 36 34 41 Fax:56 36 28 46
Germany: VideoComp, Overursel Ph:61 71 59 070 Fax:61 71 59 07 44
Italy: KB srl, Bologna Ph:51 76 55 63 Fax:51 76 55 68
Japan: c/o Omni Int'l, Seattle, WA Ph:(206) 628-2924 Fax: (206) 628-4324
Netherlands: Take One Prods., Heerlen Ph:45 22 57 83 Fax:45 21 22 63
Norway: Capella, Oslo Ph: 222 00 806 Fax:222 00 805
Portugal: Chroma, Coimbra Ph:351 39 273 43 Fax:351 39 27 401
Spain: Arkofoto, Barcelona Ph:33 01 00 20 Fax:33 18 02 77
Sweden: Karlberg & Karlberg, Bjarred Ph:46 47 450 Fax:46 47 120
UK: ZCL, Lichfield, Staffs., Ph:54 34 14 817 Fax:54 32 50 713
USA: American Software, Illinois Ph:(217) 384-2050 Fax:(217) 384-2055
USA: MicroPACE, Illinois Ph: (217) 356-1884 Fax:(217) 356-0097
USA: Vertical, Texas Ph:(214) 466-0048 Fax:(214) 466-0428

Free Imagine 2.0
A $450.00 Value



Buy an OpalVision Main Board and get a free copy of Imagine 2.0 for OpalVision!
ACT NOW! LIMITED TIME OFFER!

Imagine 3D - the popular, best-selling Amiga 3D rendering software now supports OpalVision! And you can get a free copy ($450.00 retail value!) if you purchase an OpalVision Main Board. This isn't a stripped-down, crippled version. This is a full version of the most powerful, award-winning 3D renderer, Imagine 2.0, now with full OpalVision compatability!

Here's how it works: Purchase an OpalVision Main Board between February 1 and March 31, 1993. Send us a copy of the invoice with your name and address along with your OpalVision Warranty card and we'll send you a free copy of Imagine! U.S.A. orders include free shipping. Orders from outside the U.S.A. please include a $20.00 shipping and handling fee. Please enclose an international money order or furnish your Visa, MasterCard or American Express Card number and expiration date. Requests for Imagine and purchase documentation must be received by April 30, 1993. This offer may not be used in conjunction with other Centaur promotional offers.

opal tech

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Redondo Beach, CA 90278

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Opal Tech
Sydney, Australia

For information:
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Phone: (310) 542-2226
FAX: (310) 542-9998
BBS: (310) 793-7142

Circle 162 on Reader Service card.

REVIE

Multimedia Authoring

CanDo Version 2.0

INOVAtronics, $199.95
Hard-drive installable.
Not copy protected.
2.0 compatible.
Accelerator compatible.
Minimum system: 1MB of RAM with a floppy drive or 1.5MB with a hard drive.
Recommended system: 2+MB of RAM with hard drive or three floppies.

In an industry that is quick to call every innovation a revolution, authoring systems are an insurrection. Upstart nonprogrammers can now scale the battlements of the sanctum reserved only for the high priests of programming and create software treasures of their own.

Power to the People

CanDo puts the power to create flexible, responsive, stand-alone programs in the hands of complete beginners and nonprogrammers through a simple, clear, point-and-click interface. It also rewards experienced programmers by providing a clean, useful programming language that goes well beyond what the point-and-click interface can do. All point-and-click operations are instantly translated into script commands that can be edited or ignored. This strange hybrid of graphical and textual interfaces works well, even though there is sometimes a wide gulf between what the mouse alone can accomplish and operations that require script programming.

CanDo's list of features reads like the contents page for "How to Succeed With Your Amiga Without Learning C Programming." CanDo effortlessly displays pictures (all ECS resolutions and display modes, but not AGA's new offerings), sounds (sound effects and music), fonts (excluding ColorFonts), documents, brush animations, and laserdisc images. It responds to inputs from the keyboard, mouse, joystick, timers, and the serial, parallel, and ARexx ports. It has full support for Intuition menus, custom screens, multiple windows, screen gadgets, global and local variables, arrays, relational databases, AmigaDOS calls, and ARexx. The CanDo application builder can invoke paint tools to jazz up the display, and even put those tools in the hands of the application user. Rounding out the package is an excellent error-checking-and-reporting system, thorough on-line help, floating-point math, screen coordinates, crash recovery, and even AppEvents under Workbench 2.0.

To locate the vendors of the products reviewed, see the "Manufacturers'/Distributors' Addresses" list on p. 110.

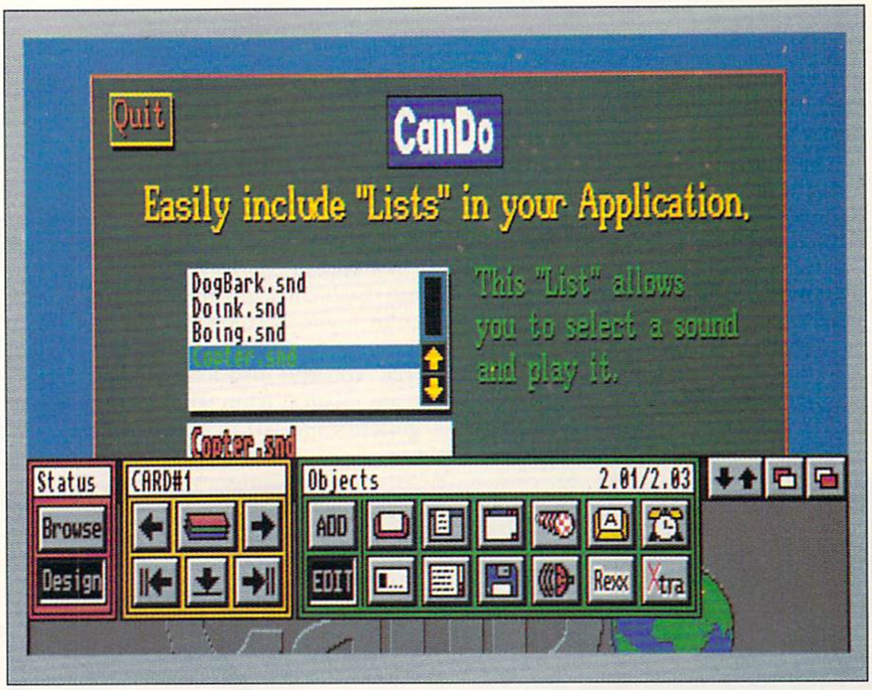
Program execution covers all available options. You can keep your programs small by installing the CanDo libraries on your system, or you can distribute programs with DeckBrowser, CanDo's freely distributable player. If necessary, you can even bind the CanDo library into the deck to create a much larger, stand-alone program.

New to 2

The improvements to CanDo 2.0 are mostly tools that simplify the deck-creation process and make it friendlier, which indicates to me that the people at INOVAtronics actively use CanDo. A BookMark feature lets you quickly pull up preselected scripts. The SuperDuper tool duplicates objects and aligns them in rows and columns. The upgrade also adds user-definable grids, pictures up to 1700X2200 pixels (such as fax images), longer scripts, and better error checking and memory management. None of these improvements are earth-shattering, but this release integrates all the earlier manuals and documentation files into a comprehensive 400-page loose-leaf book. Mostly it contains useful, clear descriptions of the script commands. Although 2.0 is not really a major upgrade (the most powerful features have been available since 1.5), it is worth having for the complete manual. I wish, however, that the docs contained a separate listing summarizing the changes to 2.0, so users of previous versions could get up to speed quickly. Many more programming examples would be helpful, as well.

The program has a very simple, clean structure for creating buttons, screens, and windows. It uses the metaphor of a deck of cards to structure its programs, echoing Hypercard on the Macintosh. Each interactive screen is one card in the deck. Decks can

W S



contain one card or many, and they can easily flip between cards. CanDo goes well beyond Hypercard's many limitations to create programs with strong graphics, animation, and sound support. For example, you can create animation motion simply by moving the mouse. The computer records the sequence and instantly turns it into script commands, which can be edited, as well. (Tinkering with the scripts generated by the visual interface makes learning the script language easier.)

The visual interface can't do everything, but it can take care of some of the biggest programming complications. Configuring screens and creating and placing buttons, lists, requesters, disk files, and so on are all handled by simple, easy-to-use point-and-click routines. This eliminates the need for complicated, messy routines that usually handle such chores. I feel a great sense of freedom when I watch windows, menus, close gadgets, and sizing tools appear at the touch of a button. It's fun to watch a program work hard so I don't have to, but it would be better if the visual interface could handle even more than it does.

The only problem with the point-and-click interface is that it must open window after window to get to the script you want. On a slow Amiga this awkwardness becomes torturous after a while. The new BookMark system alleviates the problem somewhat, but it remains CanDo's biggest drawback. The feature that makes CanDo so easy to learn ultimately hampers experienced users.

Among other improvements, version 2.0 of CanDo adds bookmark and duplicating tools to its long list of features.

Comfortable in the Middle

CanDo programs run at a decent speed, though some tend to bog down on slower Amigas. While CanDo does not create blisteringly fast animations as the more complex AMOS (Europress Software) can, and while it is not a marvel of intuitive interface engineering as the less powerful Scala (Scala Inc.) is, CanDo is comfortably positioned between the two. It skillfully combines programming prowess with ease of use. Unlike both those packages, CanDo is customized to Intuition, multitasks properly, and cooperates peacefully with other resources.

Ultimately, CanDo passes my acid test for a program: Clearly it was not designed by people who were looking merely to fill a market niche, but by people who wanted to use it regularly.

—Daniel Greenberg

Builds 3-D objects from bitmap pictures and converts among object formats.

Pixel 3D Professional

Axiom Software, **$249.95.**
Hard-drive installable.
Not copy protected.
2.0 compatible.
Accelerator compatible.
Minimum system: 1MB of chip RAM.
Recommended system: 4+MB RAM, hard drive.

The latest version of the popular Pixel 3D, Pixel 3D Professional boasts some very impressive improvements. The program has without question made another leap forward, upgrading the quality, speed, flexibility, and user interface. About the only similarities to the previous edition are the program's concept and documentation.

Briefly, Pixel 3D Professional converts bitmap pictures into 3-D objects that you can then import to your 3-D imaging and animation program. While Pixel 3D is not a full-scale 3-D renderer or modeler, it does offer some modeling capabilities and can render solid models of the objects from any angle within the program.

Pixel 3D imports bitmaps (IFF format, up to 32 colors), as well as 3-D objects in 14 formats (LightWave 3D, 3D Professional, Turbo Silver, AutoCAD DXF, Wavefront, VideoScape Binary and ASCII, ►

Imagine, Sculpt 3D, Draw 4D and 4D Pro, Caligari, Vista Pro, and Scenery Animator DEM). You can manipulate and optimize the objexts, then save them in LightWave 3D, 3D Pro, Turbo Silver, AutoCAD DXF, Wavefront, VideoScape Binary and ASCII, Imagine, Sculpt 3D, Draw 4D and 4D Pro, Caligari, or Router Bit formats. Router Bit is the same as VideoScape ASCII except it is limited to one polygon and has a unique use (more in a moment). As a bonus, the program now loads and retains grouped object infromation. Because Pixel 3D loads and saves so many object formats, you can use it as a file converter.

Rapid Rise Objects

After loading a bitmap, the program outlines the image and creates a flat 3-D object. You can request that each color (up to 31) in the bitmap be outlined, which is very useful in re-creating color logos. If color 0 is black, you can use it as a cut-out to put holes in the object. You can also load 16-shade grayscale images, from which the program generates a 3-D grid with higher and lower spots determined by the intensity level of the shades. Full white sections are the high ground, while dark gray portions are the low lands. This method lets you easily create one-of-a-kind terrains: Simply use DeluxePaint's spray can to put down different shades of gray.



Pixel 3D Professional's smoothing controls let you fit to a spline curve.

After loading or tracing your 3-D object, you can extrude, bevel, smooth, or spin it. You can spin and offset points during an extrusion, as well as type and convert bitmap-font text into an object. I find the bevel ability alone worth the price of the program. Now with the use of a Router Bit file you can create a custom shape bevel for any area of your objects, so angles, curves, and any other shape can cut the beveled edge. You can even save the bevels with separate vertices, letting you select whether or not to use Phong shading on various parts of the object.

The biggest enhancement is that Professional lets you edit points. You can now move, delete, and subdivide points and edges within your objects. While you still cannot simply add points or polygons, the feature is very useful. You can select points individually or as groups and even extrude, bevel, or smooth only selected points. The smoothing controls now include fitting to spline curves for much better looking letters and objects. The screen shot above contains before and after smoothing examples; notice there are many more points before the smoothing. The process is also much faster than in the previous version.

The user interface is completely new and is much easier to understand. While it sports a 2.0 look with 3-D buttons, the interface layout is still unique and lacks such standard elements as front/back, close, and sizing gadgets. There are no menus, either; you access everything through buttons, which open information panels. There are keyboard equivalents to many functions. The organization of the interface is clean and understandable. The only areas that can ►

be rather confusing are the system memory and smoothing settings.

Remember the Memory

As the previous version does, Pixel 3D Professional requires you to allocate system memory resources. In other words, you configure the amount of memory that the program should use to handle the 3-D objects. This is excellent if you are multitasking and want to restrict blocks of RAM for other purposes. The amount of memory allocated, however, affects the complexity of the object that can be handled; the less RAM, the simpler the objects allowed. The problem with this nondynamic allocation is that you must guess how much is required to trace the bitmap or load an object. If you don't have enough, you must reset the memory and try again.

The documentation is brief, with no index or tutorials. The text in many areas, such as smoothing and extrusion, is technically specific and could use a more layman-type explanation.

While operation was smooth, I did encounter a few problems with stray polygons during some bevel functions and odd behavior when loading some object formats from Pixel 3D into several 3-D programs. I was able to fix each of these problems with a little experimantation, however, and did not find them a major detriment. I recommend Pixel 3D Professional to anyone working with 3-D programs.

—Steven Blaize

Wordworth V2

Digita International, **$200.**

Hard drive installable.
Not copy-protected.
2.0 compatible.
Accelerator compatible.
Minimum system: 1.5MB of RAM, two floppy drives.
Recommended system: 2+MB of RAM, hard drive.

Basic word processing and small-scale desktop publishing.

For the past several years, a complementary balance of trade has existed between US Amiga owners and their English counterparts. While the best in entertainment software often originates from England, the lion's share of productivity software is designed and programmed here in the States. Now, UK-based Digita International bucks this trend with the release of Wordworth V2, a surprisingly versatile word processor that compares favorably with American offerings.

An update to Wordworth 1.1, Wordworth V2 offers all the basic features that Amiga owners have come to expect. Such staples as cut, copy, paste, adjustable margins and line spacing, find, and replace are all present. You access most of these functions by selecting icons on a tool bar. Like many other Amiga word processors, Wordworth lets you include graphics in documents. Unlike many others, Wordworth supports a wide variety of image formats in addition to IFF, such as PCX (IBM PC Paintbrush), EPS (encapsulated PostScript), and Windows BMP (Microsoft Windows). You can resize and reposition images, and a number of text-flow options help pour text around oddly shaped graphics.

Wordworth's text importing and exporting capability is just as flexible, with support for a variety of formats. You can import documents created with ProWrite, WordPerfect, KindWords, and Protext, plus such MS-DOS ►

AlfaScan and AlfaScan-Plus

400 DPI Hand Scanner 256 Grayscale Conversion Software

Regular version includes New Scan&Save Plus V1.76-V.
Plus version includes Touch Up V3.07-V.

Both models include:

- Merge It V1.4
- Alfascale scanning conversion scale
- Cartridge, Interface and Power Adaptor

Desktop Publishers and Video Professionals can produce 24 bit IFF and TIFF 256 Grayscale files with the included software. When used with products like Pixel 3D Professional from Axiom Software, generating high tech 3D logos from printed materials becomes easy, productive and profitable.



AlfaPower

External IDE Hard Drive and 8 MegaByte Ram Expansion for your Amiga 500

- Solid metal case
- RAM expandable to 2, 4, 6 or 8MB
- Holds one 3.5" or two 2.5" HD(s)
- Includes all cables, screws and software
- Autoboot, autoconfig and zero wait states
- Separate HD and RAM disable switches



Pre-configured systems with hard drive and ram installed are available. Plug an AlfaPower into your Amiga 500's expansion port and increase your performance and power in just minutes.

&

TKB-MT-AC

3 Button Crystal Trackball for any model of Amiga Computer

- Top quality construction with opto-mechanical encoder
- Two-color shining Crystal Ball
- Auto-fire button & key-lock function switch
- Long 6+ foot cord for convenient placement

If you are looking for a productive alternative to standard mouse input, an Alfadata trackball is the answer to your needs. Effortless finger-tip operation and reliable micro-switch buttons.



Product	Description	MSRP
AlfaRAM-0	External A500 8MB Ram Expansion, expandable to 2, 4, 6 or 8MB - chassis is similar to AlfaPower (above)	$149.95
AlfaRAM600-2	2MB AlfaRAM600 PCMCIA card provides 2 MegaBytes Fast Ram for Amiga 1200 or 600	$199.95
AlfaRAM600-4	4MB AlfaRAM600 PCMCIA card provides 4 MegaBytes Fast Ram for Amiga 1200 or 600	$349.95
FDD-M312	External 3.5" 880K Floppy Drive with pass-through drive connector and on/off switch for all Amigas	$139.95
RA2-8M-0	Low cost 8 MegaByte RAM expansion card for the A2000, expandable to 2, 4, 6 or 8MB - 0K installed	$149.95
RA5-4M-0	Amiga 500 4 MegaByte RAM expansion card includes set-up, RAM test software and on/off switch cable	$139.95
RA5-512K	Amiga 500 512K RAM expansion module (501-style) with Real Time Clock and on/off switch cable	$69.95
RA6-1M	Amiga 600 1 MegaByte RAM expansion device with Real Time Clock and Memory Enable Link	$99.95
SWB-M-BT	Floppy drive boot selector for Amiga 500 or 2000 - boot from drive(s) other than DF0:	$39.95
SWB-M-KS+	Auto Kickstart Switch Plus for Amiga 500 or 2000 - allows convenient switching between 1.3 and 2.0 ROMs	$39.95
SWB-M-KS6	Amiga 600 Auto Kickstart Switch - allows users to easily switch back to 1.3 ROMs for extra compatibility	$49.95
AlfaOptic	3 Button 300 DPI Optical Mouse - comes with optical mouse pad - Note: 3rd button is active	$79.95
AlfaPen	3 Button Optical Pen with pad - allows comfortable Pen-style mouse input with high resolution accuracy	$99.95
CLM-MT	"High tech" infra-red 3 Button Cordless Mouse with receiver/charging stand, mouse pad and power supply	$99.95
OMM-MT	2 Button Mouse with mouse pad, holder and extra long cord - excellent replacement mouse for all Amigas	$59.95

When You Consider Your Choices. . . Remember The Company That Has Them All.

ALFA DATA US
Post Office Box 6990
Champaign, IL 61821 USA
Tel: 1 217 356-1962
Fax: 1 217 356-1881

ALFA DATA ®

For more information, contact your nearest dealer or call 1 217 356-1962
Technical Support Available
Dealer inquiries always welcome

Circle 191 on Reader Service card.

word processors as WordPerfect 5.1 and Microsoft Word.

A number of novel features facilitate editing newly imported documents. A convenient "bookmark" function lets you jump through large documents with the greatest of ease, while tools for creating a table of contents and an index make dealing with large documents painless. The mail-merge utility accepts data from a variety of formats, including Superbase and ASCII. And if you're planning to create a multicolumn newsletter, Wordworth can accommodate up to 32 text columns with variable-size gutters.

A Font of Fonts

For creating newsletters, Wordworth offers an impressive array of fonts and type styles. In addition to standard Amiga bitmap fonts, Wordworth supports ColorFonts and the new Agfa Compugraphic outline fonts used in AmigaDOS 2.1. Seventeen Compugraphic fonts and one ColorFont (Digita Chrome) are included, giving you plenty of typefaces to choose from. Plus, Wordworth supports



Wordworth V2 lets you include PCX, EPS, and BMP graphics in your documents, as well as IFF images.

internal printer fonts, which while not as flashy as Compugraphic fonts print much more quickly.

To massage your prose into something more memorable, Wordworth includes a 110,000-word spell checker and an 826,000-word thesaurus. Once you judge your work as being up to snuff, a noneditable page preview shows you an overall view of your document before going to press.

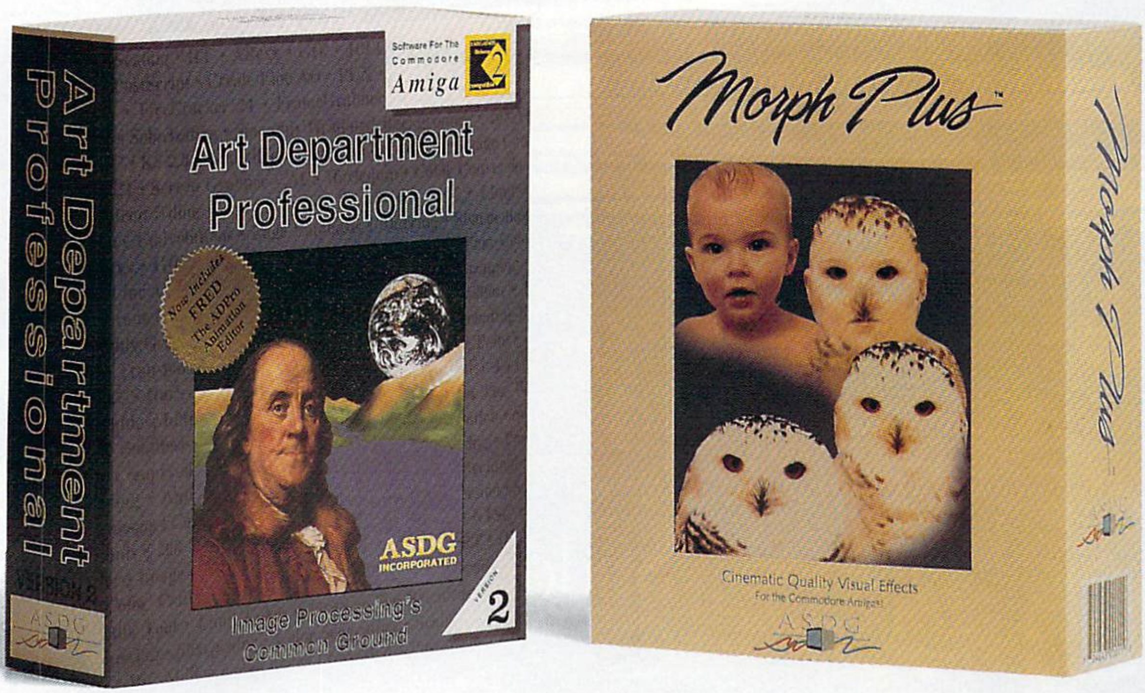
Wordworth outputs to almost every Amiga supported device, including PostScript printers. If high-quality output is your goal, use the included Compugraphic fonts. With these, I printed Wordworth documents to a variety of devices, and the output was always clear and crisp, even on a nine-pin dot-matrix printer. Wordworth's printing times were a little sluggish, but not considerably more than times for other outline-font capable programs.

All of these features are wrapped up in what Digita calls its Human Interface Protocol (HIP). HIP refers to the appearance and operation of Wordworth V2 under both AmigaDOS 1.3 and 2.0. Accessing program options is usually as easy as clicking on tool-bar icons with the mouse or punching out a sequence of keyboard equivalents. As polished as Digita's HIP graphical environment is, some foibles are apparent. The program does not support 2.0's ASL file requesters, and the existing requesters are thick and chunky, often obscuring most —if not all—of the screen.

Support for ARexx is strangely absent, and the program performs very slowly on unaccelerated Amigas. Other problems stem from the program's overseas origin. All the printer information in the manual refers to printers with UK trade names, which may cause some confusion. Finally, Digita hasn't yet set up a support office stateside; if

Continued on p. 28

Bring Home The Best



If you're thinking about getting an Amiga® special effects or image processing product, here are some facts to consider:



• ASDG's Art Department Professional was named the "Best Image Processing Program" for 1992 by the readers of Amazing Computing Magazine and "Best Video Software" by Germany's Amiga Plus Magazine.

• American Software And Hardware Distributors and MicroPace Distributors (the two largest Amiga® software distributors in North America) cite ADPro and MorphPlus as the best selling products of their kind.

• ADPro placed third among ALL Amiga® software products on the MicroPace 1992 Top 50 Sellers List.

• The Post Group, one of the largest post production houses in the world, has used ADPro and MorphPlus in the production of special effects for the prime time TV show Quantum Leap and for major motion pictures.

• Mark Swain, an AmigaWorld reviewer (and animator for Foundation Imaging, the creators of the special effects for Babylon 5), said, "MorphPlus produces the most realistic shape shifting special effects I have ever seen on a desktop."

• David Duberman, Executive Editor of Video Toaster User, said in a comparative review of Amiga® morphing products, "MorphPlus is the Rolls Royce of Amiga® morphing software... it will pay for itself with one job."

Consider the facts.
Then bring home the best.

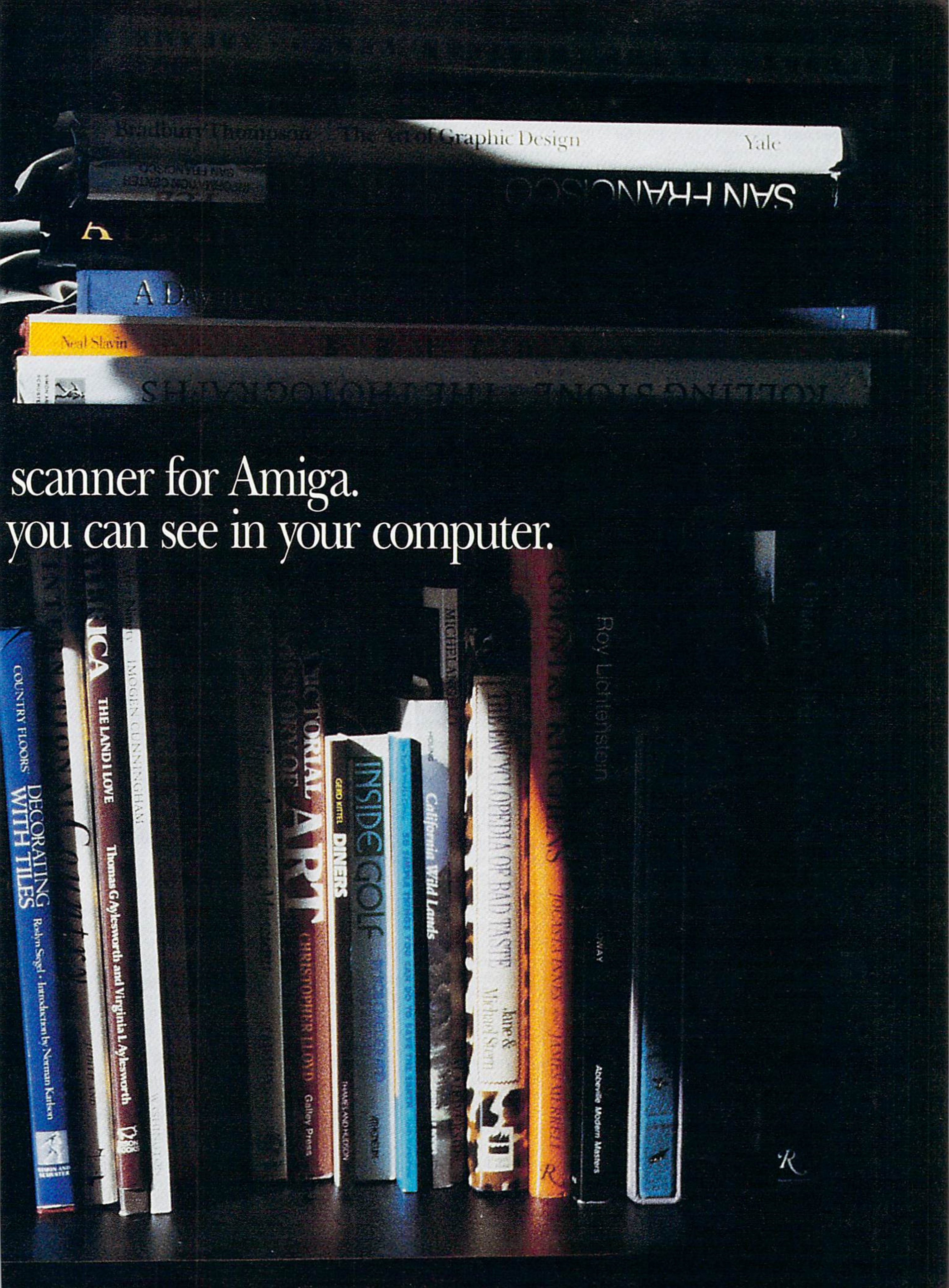
ASDG

925 Stewart Street Madison, WI 53713
608/273-6585

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Amiga is a registered trademark of Commodore-Amiga Inc.

Circle 39 on Reader Service card.


Epson makes the
Suddenly everything you see
News Photos
NOVEMBER 1991
DYNAMIC DUOS
GONE FASHION
THIRD ISSUE
FEBRUARY 1995
HARPER'S BAZAAR
OCTOBER 1991
Oktober 1991
DREAM STUDIOS
FIFTEEN SECONDS
THE QUAKE OF '89
San Francisco Chronicle
Chronicle Books
Hal Morgan
SYMBOLS OF AMERICA


scanner for Amiga.
you can see in your computer.
Bradbury Thompson The Art of Graphic Design Yale
Neal Slavin
COUNTRY FLOORS DECORATING WITH TILES
THE LAND I LOVE Thomas G Aylesworth and Virginia L Aylesworth
IMOGEN CUNNINGHAM
CHRISTOPHER LLOYD Gallery Press
DINERS
INSIDE GOLF
California Wild Lands
Jane & Michael Stern
Roy Lichtenstein
Abbeville Modern Masters

From p. 24
you need tech support, be prepared for a pricey transatlantic phone call.

BOOK VALUE

Before placing that call, however, take a look at Wordworth's excellent 350-page manual. Packed to the margins with helpful tips, reference material, and tutorials, the documentation is superlative. Chances are good that most problems can be solved by delving into the book, but Wordworth also offers on-line help.

Aside from the sluggish operation and interface oddities, Wordworth V2 ends up being quite a potent word processor. The ability to import MS-DOS format documents is a boon, and the table-of-contents, index-generation, and glossary features make Wordworth V2 compare favorably with such popular Amiga word processors as ProWrite, Final Copy, and excellence. While it might not be the most powerful graphic word processor available, Wordworth V2 serves as ample evidence that British Amiga developers aren't just playing games anymore.

—Jeff James

ART EXPRESSION

Soft-Logik, $249.

Hard-drive installable.
Not copy protected.
2.0 compatible.
Accelerator compatible.
Minimum system: 2MB of RAM, two floppy drives.
Recommended system: 2+MB of RAM, hard drive.

Entry-level structured-drawing and illustration.

Soft-Logik adds the last link in its desktop-publishing product line with Art Expression. Although PageStream has fairly good built-in structured-drawing tools, they are insufficient for creating complex illustrations. Enter Art Expression.

Art Expression's interface is clean, simple, and well laid out. The main drawing tools are located on a moveable vertical bar, and the menus are arranged logically. You can edit objects in Preview and Outline mode on an interlaced, a noninterlaced, or a Workbench screen at magnifications from 30% to 3200%.

BAD CURVE AHEAD

The toolbar contains most of the tools you expect in an illustration program—lines, arcs, polygons, ellipses, boxes, rounded-edge boxes, and Bezier curves. The weakest of these is the most important—the Bezier curve tool. While drawing a curve, you have minimal control over the control points, and you cannot see them. Worse, when you continue subsequent curves, there is no continuation between the tangents of the previous and current curve. This means that you must take great care to make continuous curves accurate.

Controlling individual curve handles requires you to first click on a tool to enter the point-editing mode. The control points of all an object's curves then become visible, turning your complex object into a confusing mass of handles. To make matters worse, none of the control points have tangent lines leading to their anchor points. Knowing whether a point belongs to a specific curve segment is difficult until you move it.

Other drawing tools are well thought out and implemented. For example, the circle tool automatically creates pie segments or slices based on percentages you enter in the corresponding requester, making pie charts a breeze. The arc and freehand tools are just as versatile and useful. The toolbar also lets you automatically close a path, convert a line to a curve (or vice versa), draw text, and set the magnification scale. Plus, you can arrange objects by moving them forward or backwards by an increment of one, select an obscured object by clicking it, and create subgroups of objects. For example, if you group together several objects that are themselves groups, the initial subgroups are retained when you disband the new group, unlike in other illustration programs.

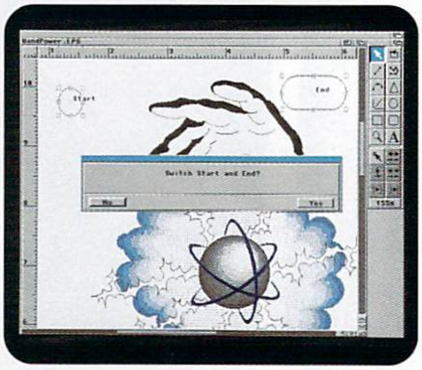
The lack of gradient fills is a surprising omission. You can accomplish similar effects with the blend tool; unfortunately, blends are not as easy to change. They make your files larger, and you must decide how many objects make up the blend when you create it. With a gradient fill, the software calculates how many steps are used.

On the plus side, Art Expression's blend tool gives you more flexiblity than other illustration programs provide. When you select two objects for a blend, Art Expression lets you switch the starting and ending objects. One annoyance is that once created, all the objects involved with the blend remain selected: If you delete the blend, you end up deleting the starting and ending objects unless you first deselect them, which is not always easy.

An excellent tool is the path-to-path function, which duplicates and fits a user-specified number of shapes along a drawn path (a curve, a freehand line, or whatever you wish). Its function is similar to the text-to-curve fitting tools available in this and other programs. The software automatically scales to fit, spaces to fit, centers, or justifies left or right the shapes on the path. A similar stand-out, the path-into-shape tool lets you fit any object or group within a drawn path. You could, for example, warp a line of text into the outline of a triangle or hexagon.

All these tools work on text objects, as well as drawn ones. Art Expression gives you 35 PostScript Type 1 fonts among which to choose. You can convert them all to editable curves or use the tools provided in the Text menu. You can output the text at your printer's maximum resolution, as well. Noticeably absent, however, are such controls as tracking, leading, and kerning.

If you don't want to start a project from scratch, Art Expression imports IFF DR2D and Adobe Illustrator drawings for editing, and the included converter program transforms Gold Disk's Professional Draw clips into IFF DR2D files. Because Art Expression does not support gradient fills, ProDraw's gradients are simply changed to solid colors. The Adobe Illustrator loader is slow and somewhat flawed; complex drawings often arrive with several objects skewed or missing. The loader does not handle compound objects properly, either. Surprisingly, you cannot import IFF images, which is an unfortunate oversight.

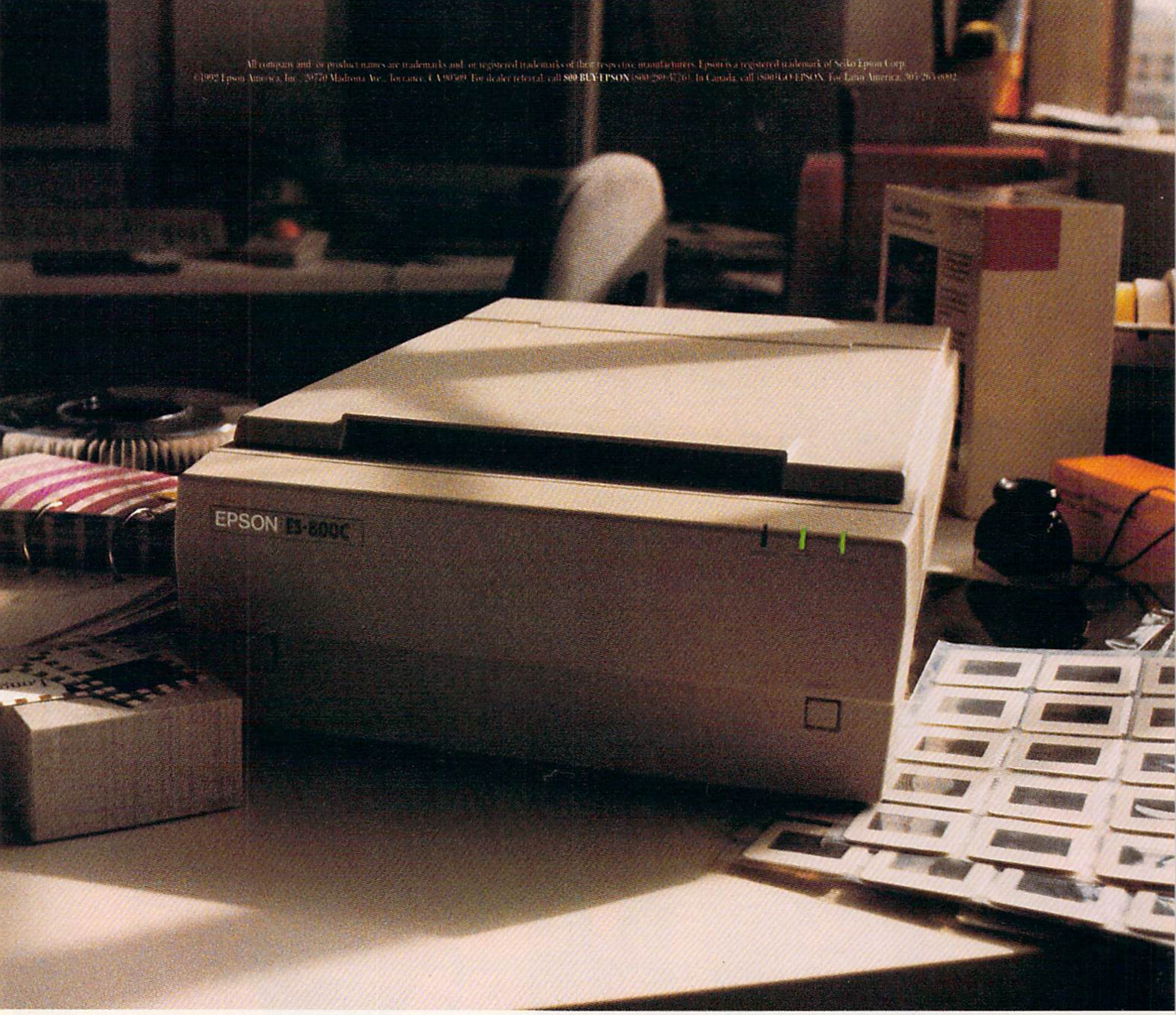


Soft-Logik's Art Expression offers a flexible blend tool.

HELP AT EVERY TURN

Art Expression's documentation is top-notch. The extensive user's manual is well written and illustrated by many screen shots and diagrams. To supplement it, you get a 100-page tutorial manual, which also explains the included auto-tracing program. A third book covers the workings of BME, the BitMap

Continued on p. 76



High resolution color scanners. New from Epson.

Epson® introduces eyes for Amiga®. Coupled with an ASDG ADPro® driver, Epson offers the best flatbed scanning combination available for Amiga.

Greater speed and higher resolution is a given for both models, and whether you opt for the 600C or 800C model, you always get 24-bit single pass color scanning with almost 17 million colors. But Epson also offers an automatic document feeder attachment and an add-on transparency unit, which give you the flexibility to scan slides. And of course it's all protected by Epson's one-year warranty.

So drop by your computer store soon and take a look or call **1-800-289-3776** and ask for representative 81 for more information. Just don't be surprised if you end up with an Epson scanner.

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30 April 1993

A Show *of* Strength

Every good show requires creativity and careful orchestration. For multimedia productions, there's a strong cast of software on call to help you get your act together.

WHILE OTHER COMPUTER platforms struggle just to define multimedia, Amiga products and users continue to demonstrate it. Standard hardware and system software provide the raw power you need to perform the greatest show on desktop. But this notable combination of strengths remains only an attractive potential until you add multimedia software muscle.

Considering the wealth of packages available, it's useful to establish some guidelines for selecting among them. At least 15 packages qualify as multimedia-production tools. They range from complete applications-software development packages to simple slide-show programs. You'll find their basic "stats" listed in the chart on p. 34. For beyond-the-stats reports, read on. After a more detailed examination of the things you should consider in a multimedia package, we'll investigate individual packages.

Levels of Complexity

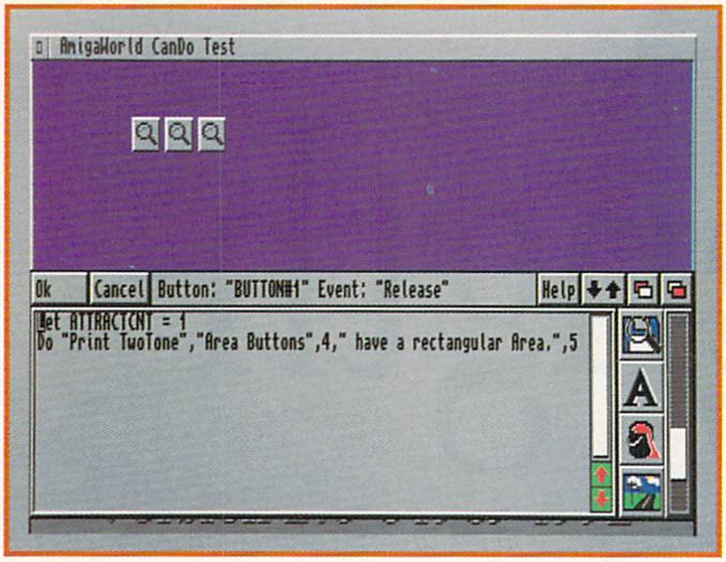
Multimedia-production software can be appraised according to two fundamental criteria: how many functions and routines they include (how much control is available), and the methods and environment used to access, utilize, and apply them. Often, both of these factors are af- ►

BY CHRISTOPHER KOHLER

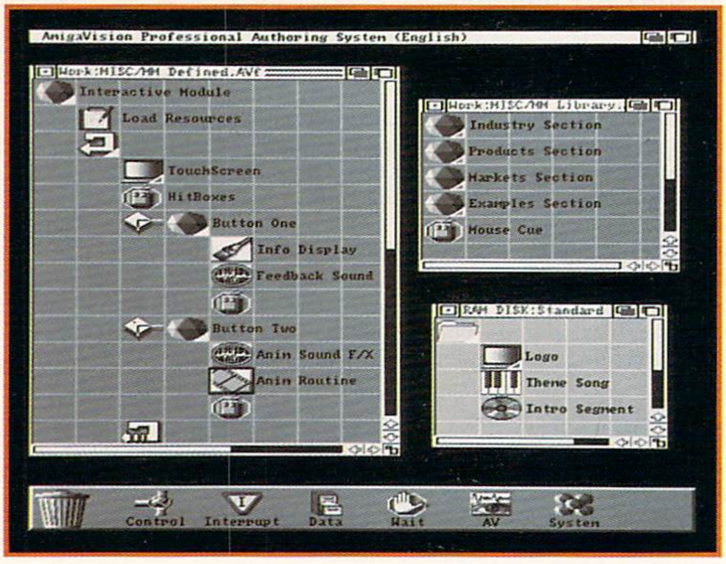
ILLUSTRATED BY TIM JONKE

fected by the intended purpose for the package (some have been tailored for certain kinds of productions and have concentrated on particular features more than others). And, as you might imagine, there is usually a direct relationship between power and complexity.

The central demand is to be able to combine images, animations, sounds, and music that have been created or captured with applications programs. Good, basic multimedia packages call into play the full range of system features, including standard file formats for graphics and sound (IFF, ANIM5, 8SVX, SMUS, and so on), all native screen resolutions and colors, both channels and all four voices of eight-bit audio, and efficient use of resources such as RAM so that preloading of elements, large files, animation play, and simultaneous operations will be smooth. Going a step further, multitasking with AmigaDOS commands, ARexx calls, and linking with other applications opens up many potentials.



CanDo can do your bidding, whether you communicate via scripting or via its graphical interface.



AmigaVision Professional simplifies even complex interactivity with its icon-based flowchart environment.

A next level of functionality might include external devices and the addition of further resources through software drivers, machine control, genlocking, and expanded input/output options. In this way, you can access analog video, MIDI music, and CD material, and control touch-screens and enhanced-display and audio devices. It's also becoming more common for such programs to directly support leading Amiga expansion cards and peripherals, such as those providing 24-bit graphics, digital audio, video effects, and the like.

Interactivity is essential to some multimedia applications. While some packages are only rudimentary in this regard, those intended for more intricate interactivity typically support several flexible methods and devices. Similarly, the software routines, production structure, and hardware support represent a tightly interrelated combination.

Other considerations include modularity, or how convenient it is to create "chunks" or subroutines that can be inserted into other productions. Also, some authoring programs come with independent player utilities, enabling productions to be distributed and used on other machines without running the original development program.

Scripting Success

Text-based authoring "languages" produce scripts that the computer can follow. Text scripting can offer very detailed and exacting control over almost every aspect of a production. While typing command sequences line by line can become tedious, especially with more elaborate productions, the advantages of text-based scripting are distinct. Even some packages that lead with other kinds of interfacing contain options for scripting. The power of scripting is boosted further when the script can subsequently be compiled to an executable file, which results in small, fast productions.

One of the earliest contenders in the text-scripting realm was The Director, from ***The Right Answers Group***. **The Director 2** ($129.95), the current version, offers more than 130 commands to construct a range of productions.

DEdit, The Director 2's text editor, contains features helpful not only for writing scripts, but also for debugging. This means that scripted routines are run from within DEdit and errors or faulty sequences are caught and identified by the software, assisting in proper and effective authoring, which is especially useful for the novice or anyone producing long or elaborate scripts. Advanced users may prefer to use their favorite text editors.

The Director 2 controls the standard Amiga resolutions, as well as directly supporting Digital Creations' DCTV and Black Belt Systems' HAM-E display devices. Additional peripherals are addressed in the form of a ToolKit disk (available separately) containing interface modules for Commodore's CDTV, MIDI equipment, serial-port connecting peripherals, Pioneer's LDV4200 laserdisc player, and Haitex's X-Specs 3D

stereo glasses. Unfortunately, no direct support is available for 24-bit display, specialty-audio, or video-effects boards, although you can access these things via ARexx.

With its depth of control and ability to "manually" manage many facets of a production, The Director 2 has been used for a wide variety of projects in professional, educational, artistic, and entertainment fields, demonstrating the diversity of applications possible for a powerful and flexible general-purpose authoring package. Still, these strengths demand more from the user in terms of programming savvy and considerable familiarity with the many options offered within the package. The manual is well-ordered and concise, but neophytes in programming, multimedia and/or Amigas may find it difficult.

While *INOVAtronics* identifies **CanDo 2** ($149.95) as a "software authoring system," it does qualify as a multimedia package—at least by definition—as it integrates a broad array of elements and can produce many multimedia applications.

CanDo presents a combined graphical/textual interface to semi-automate the process of building scripts (more than 200 commands and functions) using a "card-deck" context, much like HyperCard for Macintosh systems. A series of on-screen requester panels, control buttons, and dialog boxes guide the steps necessary to enter definitions, commands, and option selections.

The versatility of CanDo is founded on a capable and sophisticated collection of functions and routines, enlarged with calls to AmigaDOS and ARexx, plus modules dedicated to port input/output activity. The program's interface design, including some graphic screen utilities, a built-in basic paint program, and a degree of automation, simplifies program use. But even the manual warns of some possible difficulty in using the more advanced techniques.

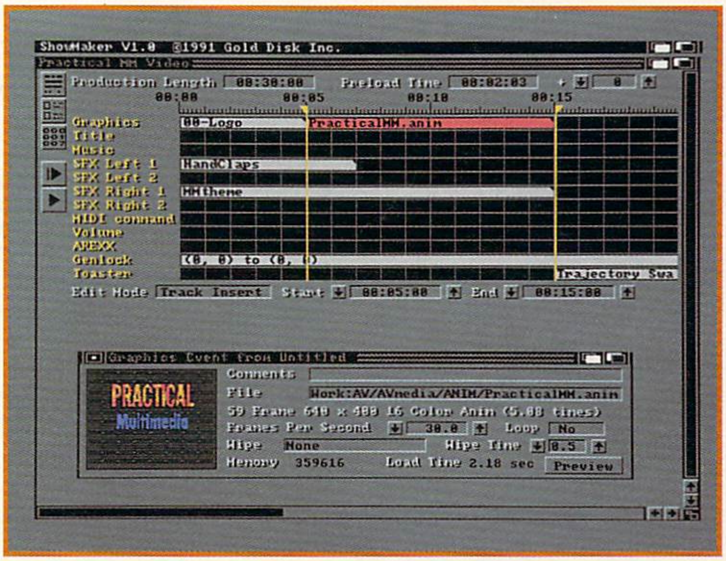
CanDo's features reveal its system-application bent: There are no drivers for external equipment or particular expansion items and little provision for some more fully developed multimedia that would benefit from such resources. Those with enough programming experience could likely accomplish such things via CanDo's facilities, but it's not complete within the package. Also, there are a couple of options for producing "stand-alone" applications, including one requiring the licensing of the cando.library.

Hyperbook ($99.95, *Gold Disk*) provides a very similar but rather simplified version of the card-deck approach. Its smaller set of functions allows an easier, almost self-explanatory graphic interface involving no text scripting other than optional ARexx macros. The drawback here is that many multimedia elements—even basics, such as sound—are accessible only through AmigaDOS, ARexx, and other programs.

Thinker ($80, *Poor Person Software*) occupies a category of its own as a "hypermedia" program. Originally produced as a hypertext creator, further media options such as graphics and CD-ROM support have been cultivated in version 2.1.4. The developer has an especially frugal outlook (as indicated by the company moniker) which is manifested in the humble, sparse documentation, and avoidance of features developed in other applications that can be used in concert. This philosophy has Thinker providing a specialized, focused application that satisfactorily and affordably fulfills its claims…no more, but no less.

Get Graphical

Graphical and iconic interfaces are popular because they provide simplicity and ease. Programs taking this approach allow you to construct productions via visual pictograms of the program's controls. Their interfaces usually take the form of diagrams, graph layouts, and flowcharts, or timelines and multitrack bars. Whereas the former approach emphasizes linear sequence and production structure, the latter better accommodates precise timing and simultaneous events. ►



Your various multimedia elements are represented as horizontal bars on a grid within ShowMaker.



The new Media Madness module of Bars&Pipes Professional 2.0 provides numerous multimedia-control options.

Multimedia Production Software

	AmigaVision Professional	Bars&Pipes Pro 2	CanDo 2	Deluxe-Video III	The Director 2	Elan Performer	Helm*
Interface	Graphic	Graphic	Graphic/Text	Graphic	Text	Graphic	Graphic
Scripting[1]	Auto ASCII	Auto	Auto ASCII	Auto	ASCII	Auto	ASCII
Color Support[2]	ECS AGA	ECS	ECS	ECS	ECS	ECS	ECS
File Formats Accepted	IFF-ILBM ANIM5 ASCII 8SVX SMUS MIDI Dbase III CDXL PAN	IFF-ILBM 8SVX SMUS MIDI	IFF-ILBM ANIM5 ASCII 8SVX FTEXT	IFF-ILBM ANIM5 8SVX SMUS	IFF-ILBM ANIM5 ASCII 8SVX SMUS	IFF-ILBM ANIM5 8SVX	IFF-ILBM ANIM5 8SVX SMUS
File Formats Generated	Program	Program SMUS MIDI	IFF-ILBM ASCII FTEXT	Program ANIM5	IFF-ILBM ANIM5 ASCII	Program ANIM5	Program IFF-ILBM ANIM5
Standards Supported	MIDI	MIDI SMPTE	n/a	MIDI	MIDI	n/a	PostScript
Expansion Support	n/a	IV-24 Toaster SunRize audio	DCTV HAM-E	SuperGen	DCTV HAM-E X-Specs 3D	n/a	n/a
Peripheral Support	Laserdisc Touchscreen CDTV	Laserdisc SuperGen G-Lock SyncPro VCR	Serial I/O Parallel I/O	n/a	Laserdisc CDTV Serial I/O	n/a	n/a
Program[3] Support	ARexx	ARexx Imagine, Scala Real 3D, CanDo AmigaVision SuperView	ARexx	ARexx (out only)	ARexx	n/a	n/a
Fonts	System	System	Y	System	System	System	System
Clips[4]	Y	Y	Y	Y	N	N	Y
Play/Exec[5]	Y	Y	Y	Y	Y	N	?
Suggested[6] Uses	General MM	Presentations DTV	System Applications	DTV Presentations	Presentations Custom MM	Presentations	System App Custom MM

Notes:
* Information on Helm and MediaLink preliminary and unconfirmed.
1 ASCII indicates that the program generates ASCII text that you can use with a text editor.
2 ECS=Enhanced Chip Set, available for A3000 and earlier machines. AGA=Advanced Graphics Architecture of A1200 and A4000.
3 Programs you can run and interact with via main program.
4 Does the package provide sound and graphics clips for use in your productions?

Features Comparison Chart

Hyperbook	MediaShow	Media Link*	Presentation Master	Scala MM 200	ShowMaker	Thinker 2	TV*Show
Graphic	Graphic	Graphic	Graphic	Graphic/Text	Graphic	Text	Graphic
Auto	Auto	Auto	Auto	Auto ASCII	Auto	ASCII	Auto
ECS	ECS	ECS AGA	ECS Virtual 24-bit (dither)	ECS AGA 24-bit	ECS	ECS AGA	ECS
IFF-ILBM ASCII 8SVX	IFF-ILBM ANIM5 8SVX SMUS	IFF-ILBM ANIM5 8SVX MIDI DSS Sound Tracker Noise Tracker	IFF-ILBM ANIM5 ASCII EPS	IFF-ILBM ANIM5, 16, 32 8SVX SMUS DSS Sound Tracker	IFF-ILBM ANIM5 8SVX SMUS MIDI	IFF-ILBM ASCII	IFF-ILBM ANIM5 8SVX
Program	Program	Program	PostScript EPS	IFF-ILBM ANIM5, 16, 32 8SVX	Program ASCII	Program	Program
n/a	n/a	MIDI SMPTE/EBU PostScript Z-modem	PostScript SAGE	MIDI	MIDI SMPTE VuPort	n/a	n/a
DCTV	DCTV	24-bit cards	DMI Resolver	CDTV IV-24 OpalVision	DCTV Toaster	n/a	n/a
n/a	n/a	Still video Laserdisc VCR	Film recorders Laser printers	Still video Laserdisc VCR	Laserdisc	CDTV	n/a
ARexx	Video Font Maker	ARexx	n/a	ARexx	ARexx Video Font Maker	n/a	
System	System	System	PolyFonts Compugraphic	System Scala	System	System	System
N	Y	Y	Y	Y	Y	N	N
N	Y	Y	Y	N	N	N	Y
System Applications	Presentations	General MM	Presentations	General MM	DTV Presentations	Hypertext Hypermedia	Presentations

5 Does the program generate executable files or come with a freely distributable player?
6 Uses for which I feel each package is best suited. General MM=broadly capable of most typical applications: random-access presentations, interactive training, automated displays, some desktop video and more advanced options. Presentations=sequential productions: timed and untimed, attended and unattended. DTV=desktop video, with such features as overscan and video-equipment control. System Applications=design bias toward productions/applications for use directly on Amiga. Custom MM=particlular power for unique functions and advanced control. Hypertext and Hypermedia=nonlinear organization and enhanced access for large amounts of similar data types.

Prompts and dialog boxes sometimes assist in entering many details and definitions as necessary for complex control.

In terms of easy and versatile production and access to advanced capabilities, ***Commodore's*** AmigaVision has arguably set a standard. Sporting one of the most intuitive graphic interfaces, AmigaVision makes a number of useful productions almost immediately available without specialized scripting. It's a comparatively full-featured package, offering functions and resources for most types of multimedia—from the simplest "slide shows" to the most complex presentations, and from networked computer-based training to free-standing interactive kiosks. The brand-new **AmigaVision Professional** ($399) contains some improvements and additions.

Some advanced applications will benefit from varying degrees of technical comprehension, production and design skill, and a more-than-passing knowledge of AmigaVision's details. Integrated databasing, interprocess communication, involved interactivity, and managing multiple media with external resources are areas where such expertise is helpful. Yet AmigaVision simplifies even these realms through its visual structure, organized prompting, and on-line help.

The iconic, flowchart interface assists clarity and speed. Its modular method offers power and versatility. The newer version has a resource screen for conveniently organizing many elements, too.

Most standard system resources (hardware modes and software file formats) are addressable through easy selection and defined options, and the software supports several laserdisc players and CDTV/CD-ROM. AmigaDOS calls, ARexx porting, and application multi-

OBJECTIVE ADVICE

MULTIMEDIA PRESENTATIONS CAN be produced and delivered in a wide variety of ways. The method you choose will depend on your resources, purposes, and preferences. Regardless of what those are, here are some key issues to keep in mind.

Content Material

The more types of elements you can include, the greater your options. If your multimedia program can handle still screens, animations, several sound and music formats, a variety of resolutions, and external material such as video, then you and your presentations will enjoy the broadest creative and productive freedom. The combining and transitioning among materials are handled differently by each program, and this should factor into your choice.

Delivery Systems

Some presentations can be conducted exclusively at one location, such as an in-house facility, while others might be intended for multiple installations.

Single-site presentations allow more elaborate hardware configurations. Thus, they support presentations that require particular equipment (VCRs, MIDI, etc.), lots of expansion (specific boards, RAM, mass storage), specialized display and audio setups, even multiple Amigas. A multimedia program that best matches your mix of items will offer the most potential, although you may want to build upon the features of a particular package. Consider which device drivers are necessary, whether they are provided or need to be created, what types of cabling and connectors are involved, and other details.

Portability—a self-contained system that can output at most locations—becomes important for outboard presentations. A minimal system could be just a CPU or a CDTV, a mouse or remote-control device, and a genlock (to avoid bringing a monitor). (While Commodore's internal genlock is inferior for recording to tape, it performs well for most presentation situations.) In this case, you may prefer a multimedia program that provides the most performance while requiring minimal hardware.

Your choice of programs will also determine how much memory you will need, what types of drives you will require, and so on.

Display

For live presentations, you might want a monitor for reference in addition to the one for the audience. This allows you to concentrate on your material instead of continually turning around to check the display, and removes limitations on the placement of monitors and projection screens. The reference monitor need not display video portions; I've often used an RGB display for myself while sending genlocked displays to projectors. When you include video, your software's overscan abilities become important: They influence the content material and genlocking options.

Interactivity

Many presentations need no more than a basic ability to trigger a sequence of segments or to reverse direction. Multimedia productions can, however, offer nonlinear access to all of the presentation material, providing new dimensions. Check authoring-program features that will affect this ability.

Flexibility

Presentations frequently demand alterations and last-minute work. Some programs accommodate this better than others. Look for easy file-definition procedures, clear sequencing methods, and even built-in resources for quick graphic/text creation.

The ability to use segments you have already created as building blocks for other sections or presentations can save considerable time and effort.

Similarly, presentations or parts thereof can do double or triple duty by being converted from live delivery to automated display for exhibits, to videotape for wide distribution, and to output in other forms, such as slides and handouts. Consider evaluating for these abilities. Some packages are designed for use across a broad range of functionality—from crafting very advanced presentation on beefy development systems to nimble performance on minimal systems via efficient player utilities. Others concentrate on special strengths in particular applications and are not as versatile.

—CK

BRILLIANCE™

PROFESSIONAL PAINT & ANIMATION

IT HAD TO HAPPEN...

We put the creators of Deluxe Paint ST™, Deluxe PhotoLab™, and DCTV Paint™ together with the goal of developing the most awesome paint and animation software ever for the Amiga. After many man-years of inspired design and programming, it is simply... **BRILLIANCE**!

IT'S AMAZING...

By far the best paint program ever created for the Amiga. Paint and animation features you wish you had before are here now. You can paint and animate in virtually every Amiga graphics mode including all of the new AGA modes! Brilliance also has a unique true color mode allowing you to create and modify full fidelity 24 bit pictures. Your Amiga has never shined as bright as it will with **BRILLIANCE**.



Artwork by Jim Sachs. Created at 640x480 in 256 colors on an Amiga 4000.

IT'S POWERFUL...

Multiple levels of UNDO allow you to experiment without fear. Written in assembly language for the quickest response, smallest program size and the most sophisticated features. A rich set of drawing modes will unleash your full creative potential. Multiple paint and animation buffers can be worked on at once, limited only by memory. The more memory you have, the better Brilliance becomes. Power, features, sophistication, ease of use, Brilliance has it all.



IT'S EASY...

The user interface was designed to put YOU in control, not the program. Quickly and precisely control all paint and animation features with the dynamic menuing system. It gets out of your way at the press of a button. A help window assists in identifying controls as well as current modes. The stacking menu bars can be user configured and recalled with function keys. You can even save your own configurations.

IT'S BRILLIANCE...

Once and for all, in one easy to use package, the total paint and animation system for the Amiga.

Best of all, it's from Digital Creations.

Works with all Amiga models.
Minimum memory requirement: 1 Meg.

Graphics modes supported:
Register based 2, 4, 8, 16, 32, or 64EHB Colors. 6 bit HAM, 12 bit true color, 24 bit true color.

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(True color modes are represented with HAM mode displays however they are maintained in full fidelity internal representations.)

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tasking are well integrated, adding vast potential. Other strengths include its structured object editor, real-time previewing, and a freely distributable player program. AmigaVision has an integrated database capacity, including Dbase III compatibility.

Its chief weakness is crude timing control and lack of support for MIDI, SMPTE, and other standards. Also, while it provides important resource-management, the method is awkward.

These limitations are overcome in **ShowMaker** ($395, ***Gold Disk***). Billed as "The Complete Multimedia Presentation System," it is apparently more of a desktop-video production program. Still, it is capable of much more than just video.

ShowMaker's interface utilizes gridded, multitrack, vertically stacked timelines upon which you place bars representing graphics, animations, titling, music, sound, and video effects. You define each effect separately; the bars' lengths represent duration. This affords precise item timing and synchronization according to music (beats) or absolute time (seconds). You can adjust individual elements further in their respective modes, such as animation frames-per-second and loops, title scroll rates, display transitions, and musical tempo. You can view this information as a sequential cue-sheet listing or an ordered storyboard with text and graphics.

This type of program encourages the use of numerous elements, raising issues of loading and playing many large files through limited RAM. ShowMaker's unique "dynamic preloading" automatically determines the system resources necessary for smooth performance, monitors them, and manages the loading and unloading of components on the fly. Once you have defined a production, you can perform subsequent editing entirely with the mouse; the program will alter resource management as necessary.

ShowMaker supports CAV and CLV laserdisc players, MIDI, SMPTE/MTC, and ARexx—and specifically controls Digital Creations' SuperGen 2000S genlock and NewTek's Video Toaster, whether installed in the control computer or in a second system. Together, these features amount to a rich choice for artful, accomplished multimedia production. ShowMaker lacks interactive options, however, beyond simple pause-and-resume mouse support.

To produce its simpler program, **MediaShow** ($129), ***Gold Disk*** stripped transport control, device drivers, and other features from ShowMaker. Like its big brother, MediaShow is built on the timeline, and, with Dynamic Preloading, coordinates a synchronized play of graphics, animations, text, and audio. Gold Disk has thrown in basic paint and music software to sweeten the deal.

Another timeline-based package is **DeluxeVideo III** ($149.95, ***Electronic Arts***). Similar in approach to ShowMaker, DVideo III is rather intricate, even clumsy, in use but has increased controls within the program for incorporating more effects (rather than relying on the sequenced material). It also includes more interactive branching capabilities.

DVideo III's timing accuracy is to 1/60th of a second (a jiffy). It allows detailed use of animbrushes and scrolling backgrounds in addition to other, more typical material. While you can access MIDI equipment, SuperGen genlocks, and, theoretically, many other devices via a Device Track with the help of ARexx, this ability is available only in Expert mode and requires custom programming outside of the authoring package.

DVideo III comprises four separate programs. One coordinates and enhances external elements (usually created with other applications) and optionally combines them with effects from within the program. Another copies these presentations (or "videos," as EA terms them) and all associated files to other disks. The third is a player utility for performing finished productions. The last is a straightforward, linear, graphics-only "SlideShow"—perhaps in case all the rest becomes too much to deal with.

SLIDE INTO HOME

Early in the history of the Amiga, plain slide-show software was the only type available for producing presentations. Today, high-end graphics cards include slide-show programs. For instance, Centaur's OpalVision comes with Opal Presents!, which arranges miniaturized versions of your graphics in a "filmstrip" and provides buttons for selecting options. With 20 transition effects, several genlocking modes, simple timing, and a receive-only ARexx port with an "advance" command, you can create basic sequential presentations of still images.

Similarly, ACS's Harlequin 32-bit board comes packaged with Slide32, which offers spartan control through text-file scripts.

A more agile presentation program, also bundled with hardware, is **Elan Performer 2**. Previously available separately, the program is now bundled with *NewTek's* DigiView still digitizer in a package called **MediaStation** ($249.95). Its interface provides a sensible representation of the Amiga keyboard. You assign images, animations, and sounds to individual keys by clicking on them with the mouse. On-screen dialogue boxes and buttons list directories and files for selection, and define the appropriate options for timing, looping, and so on. The program allows especially quick presentation construction, and assigning individual or groups of elements to keys provides interesting (if limited) interactive potential. The same scheme also offers nearly immediate nonlinear access to file play, which encourages such intriguing applications as real-time video production with genlock and audio overlays, possibly without scripting or sequencing.

I think that **TV*Show** ($99.95, ***Zuma Group***), was the first Amiga program to specialize in presentations. Even now its use of icons to craft productions and select among a set of the most common screen transitions keeps it a credible contender for those wanting easy, reliable performance, and reasonable creative options with minimal fuss.

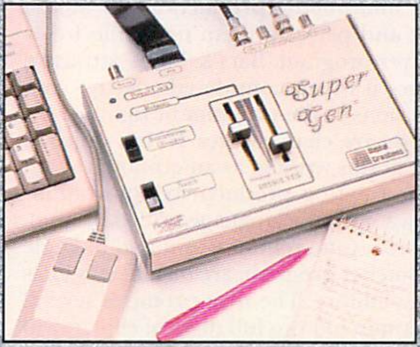
Zuma's companion titling program, TV*Text Professional ($169.95), is optimized for quickly building satisfying screens. With surprising ease, you can generate a wide variety of special text effects and combine them with practical graphics and backgrounds from within the program, from other sources, or both. The overscan capabilities of both programs are a useful feature for recording to video.

In terms of creating strictly still-image presentations, the most complete and adapted package is probably **Presentation Master** ($299.95, ***Oxxi***). This is a profes-►

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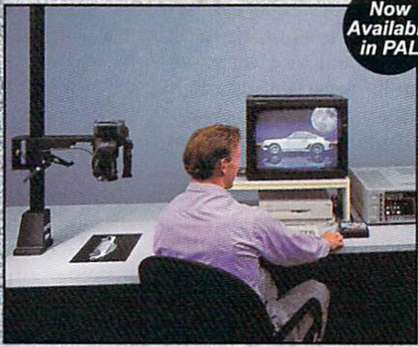


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sional-level product for creating, producing, and managing not only slide shows, but also important support material and hardcopy output such as speaker's notes, audience handouts, and storyboards.

Using scalable fonts, structured objects, automated charts and graphs, and 24-bit color, Presentation Master generates high-quality slides and images. These are suitable for display on Amiga systems, for PostScript output to laser printers, and for output to film recorders. Presentations can be linear or interactive.

For more dynamic multimedia presentations, Scala has taken a leading position alongside AmigaVision. The latest version, **Scala Multimedia 200** ($495, ***Scala Inc.***), takes the program beyond its prior bounds of presentation into the broader interactive arena. This is evident by the new Lingo scripting language, which can invisibly drive productions created solely through the graphical user interface. Lingo can also be accessed via ARexx or directly with a text editor.

Scala's wider scope is also seen in its new EX modules, which seamlessly support laserdisc players, Canon still-video, MIDI, Soundtracker/DSS sound, CDTV, and more. Additional EX modules are planned.

Scala's display transitions have been improved to rival the very best on the Amiga in both speed and effect. An innovative technique of timing, accurate internally to milliseconds, is so flexible that simple mouse clicks register cues in real-time to accommodate intuitive, analog synchronization of most production elements. SnapLoad—a method of preloading, dynamic and static buffering, and proprietary 32-bit formatting—speeds up graphic display and lets you play very large animations (even digitized video) directly from disk, unhindered by RAM limitations.

Hierarchical interactivity supports variable and conditional branching. You can define "hit spots" easily and simply, to allow triggering choices of actions. You can multitask additional applications programs and employ ARexx for interprocess communication.

The program design is clean and responsive. A new Shuffler interface lets you reorganize productions by moving reduced screen representations. Scala still comes with a nice collection of elegant fonts and stunning background textures. Unfortunately, a hardware "key" or (dongle) must be installed in a mouse port for the program to run. While the dongle does pass the port through, it is one of the most inconvenient and imposing forms of copy-protection—a big disappointment, even if understandable.

A superset of Scala is InfoChannel, with features for multiple distributed displays and unattended performance.

On the Way...

The Blue Ribbon SoundWorks has announced another entrant in the multimedia genre, **Bars&Pipes Professional 2.0**, which I looked at in beta stage. Not just a music-sequencer any more, the inclusion of a module called Media Madness empowers Bars&Pipes with multimedia control within its tracks framework. This is effected with various new Tools, all of which can be configured separately. There are Tools devoted to NewTek's Video Toaster, GVP's G-Lock genlock and IV-24 board, Digital Creations' SuperGen, SunRize's AD516 and AD1012 audio boards, and video equipment through interfacing with Interactive Micro-Systems' MediaPhile. Accessory modules synchronize media elements among other products, including Scala, Impulse's Imagine and Activa's Real3D modelers, and Blue Ribbon's own SyncPro sync box. Advanced MIDI and SMPTE options are available, too.

You can save multimedia productions in Media Madness format and perform them using the freely distributable Player program. Bars & Pipes' attractive graphical interface is widely considered effective, and these new dimensions to the program fit right in.

Eagle Tree Software characterizes **Helm**, which is not yet shipping at this writing, as an economical but able package for creating productivity applications (called Books) via a scripting language (called Breeze). Notable image-processing routines, as found in Eagle Tree's popular Butcher program, are included as tools along with image editors. The firm promises several example applications and two full disks of clip art will accompany the release.

According to developer ***1001 Software Development***, the upcoming **MediaLink 3.0**, will be close to Scala's InfoChannel in terms of purpose and capabilities. Press literature promises InoChannel's functions, and a large number of other features. Claiming developmental roots going back to 1988 and worldwide commercial installations, the company hopes for superior performance and lists almost exhaustive resources, including support for: "all popular 24-bit cards," VCRs, and many other devices; Z-modem protocol for transplatform screen editing; and data-broadcast via cable, network and/or satellite using "the upper lines of TV signals" for remote access and updating.

And finally, ***Knowledge Media*** continues to work on **Viva II**, which promises an object-oriented approach to developing multimedia productions, including interactive presentations, "media databases," and even full applications.

Defining Multimedia

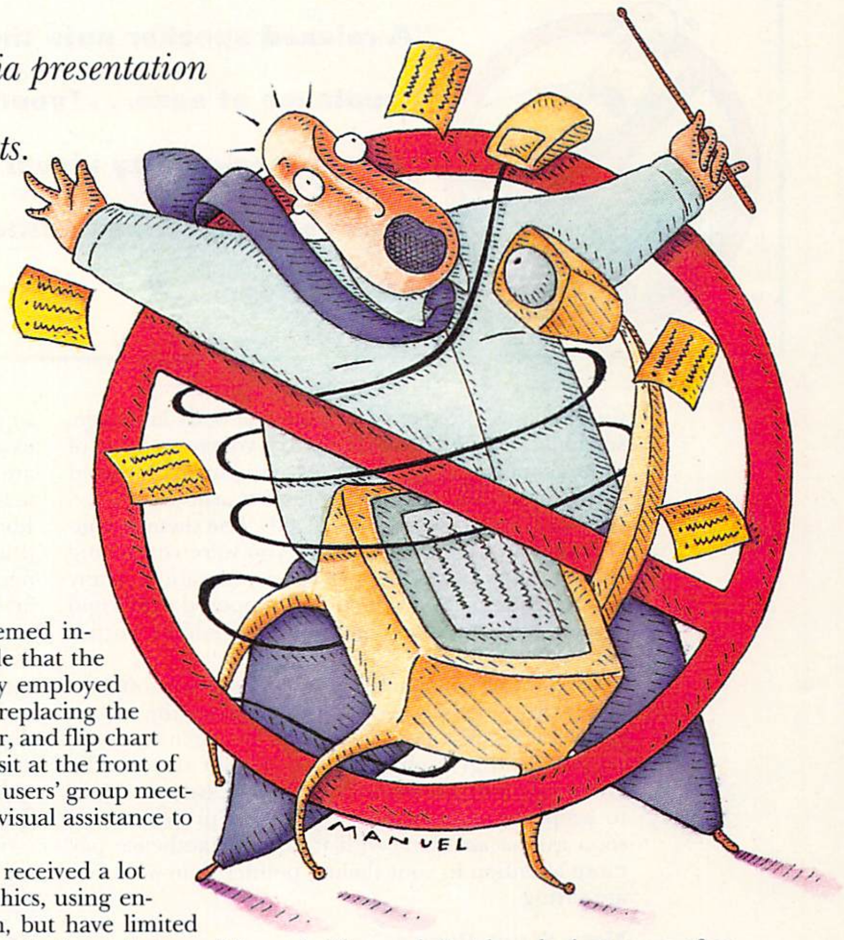
This wide diversity of multimedia packages poses a challenging, hologrammatic mosaic of criteria for comparison. Evaluating programs is extremely relative: There are no fixed, objective ratings with which to measure them. Many developers promote their products aggressively, but ambiguously, as multimedia—with liberal use of terms like "revolutionary" and "complete." As you have seen, though, there are actually many shades of meanings. Depending on your particular needs, you might find packages not marketed for multimedia—including such game-development packages as Europress' AMOS, Oxxi's Aegis Visionary, and so on—helpful.

What's sure is that there are abundant, powerful, and ever-expanding choices. If you want multimedia, you're definitely in the right ring. So, now, on with the show! ■

Christopher Kohler is an independent marketing professional, and an author, speaker, and consultant on multimedia topics. A long-time professional Amiga user, he was formerly a Commodore executive and, as such, was responsible for creative multimedia and was instrumental in developing the company's own use of these applications.

THE POWER OF POSITIVE PRESENTATION

How you deliver your multimedia presentation is just as important as its contents. Here are some essential do's and don't's for preparing yourself for an effective presentation.



Only a few years ago, it seemed inconceivable to many people that the Amiga could be successfully employed as a presentation machine, replacing the overhead projector, slide viewer, and flip chart in one fell swoop. Today, Amigas sit at the front of many classrooms, boardrooms, and, yes, even users' group meeting halls, ready and eager to provide audio-visual assistance to group speakers.

You may be like many Amigans who have received a lot of advice on the mechanics of creating graphics, using encoders, displaying text in NTSC, and so on, but have limited experience speaking before a group. Multimedia is not just graphics and video, so let's take a look at some often neglected elements of winning and memorable presentations.

Keep the Audience Informed

Your first order of business when speaking to a group should always be to let the audience know what, and how much, to expect. Design the first graphic to outline the two to four major points in your discussion. (If you use more than four main points, your speech won't appear focused.) This is a good time to tell them how long you plan to talk. Remember: You can't hope to keep the group's attention if people expect you to talk for 30 minutes, but you ramble on for an hour. Another useful technique is to tell the crowd which main point you intend to spend the most time on. Put yourself in the place of an audience that sits patiently through twenty minutes of a supposed thirty-minute ►

BY DAVE JOHNSON

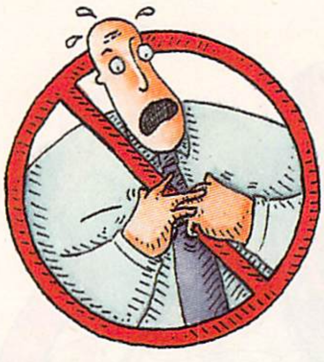
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speech, only to see that the speaker has two more major points to go! If your last point will take only a brief time to discuss, let them know. It works.

The Body Visual

One of the most important visual aids you have at your disposal, Amiga notwithstanding, is yourself. You are a valuable tool for getting your message across, and you can likewise have a disastrous effect on the group's attention span if you don't think about how to use your body.

What separates a good public speaker from a bad one? More often than not, it is simply body language. A relaxed speaker puts the audience at ease and makes the information flow a little easier. It takes only a little conscious effort to convey natural body language, so think about the way you carry yourself ahead of time. Don't clasp your hands, either in front or behind you. Your hands are attached to your arms for a good reason: They make nifty visual aids. Use them to convey normal body motions, as if you were conversing with another person in private conversation. Many people think that body motion is supposed to be rigid during public speaking, but nothing could be further from the truth.



"A relaxed speaker puts the audience at ease. . . [your hands] make nifty visual aids. Use them to convey normal body motions. . . "

While we're talking about natural body motion, how about props? Some people love to pick things up—their notes, a pointing stick, chalk, or a marker—and keep a deathgrip on them throughout the speech. While props may come in handy on occasion, it is best to keep your hands empty. Put your prop down as soon as you are done with it, lest the audience pay more attention to your flailing pointer than what you are saying.

Next Slide, Please

You will likely be using your Amiga to drive graphics, so an appropriate question arises: How do I advance slides and animations as inconspicuously as possible? Some folks opt to have a helper nearby to whom they repeatedly utter the phrase, "next slide, please." There are few things you can do, aside from running your fingernails down a blackboard, to annoy a crowd more quickly.

Software such as Elan Performer (now sold as part of NewTek's Digi-View MediaStation) and Deluxe Video III (Electronic Arts) allow you to advance graphics entirely from the mouse, so use that rodent Commodore so thoughtfully supplied with your computer. The cord is not likely to be long enough, so buy a long extension cable that will allow you to move around the floor as much as you please. Ideally, clip the mouse to your belt or put it in your pocket so that your hands are free to convey all that nifty body motion we discussed. An arguably better solution is to purchase a cordless mouse. Because they have a limited range (about six feet), you will still need an extension cord to get the IR receiver into the middle of the room, but you and the mouse are no longer tethered to the Amiga like a space-walking cosmonaut.

I do not recommend that you use a timer-based script style such as AmigaVision (Commodore) or Deluxe Video III offer. While there are no mice to carry or helpers to talk to, remember that if you become slowed down due to questions, embellishments, or war stories, your audio/visuals will march right along without you.

Extemporaneously Speaking

While all this is going on, where should you be standing? Not behind a podium, that's for sure. Get out into the middle of the room and move around. If you hide behind a barrier like the podium, you are, in effect, telling your audience that they aren't important enough to talk to directly. But wait, I know you're saying, "If I move around, and don't carry my notes with me, how am I supposed to remember what to say?" Well, this is called extemporaneous speaking. All that means is that you are neither repeating the speech from memory nor reading it word for word from a set of index cards. Ideally, you have practiced the speech often enough (three or four times) that you know essentially what needs to be said. Leave the notes on the corner of a table or the podium, and walk over to them when you need to refer to some aspect of your speech.

Extemporaneous speaking is a better method then rote memorization because the latter lacks sincerity and leaves you vulnerable to—you guessed it—forgetting something. If you forget even a little, the results are often disastrous because you've built a memorized speech like a house of cards: Pull one out and it all falls down. Likewise, reading directly from notes has its own pitfalls: It, too, lacks sincerity, and if you're looking down at your index cards, you aren't looking at your audience.

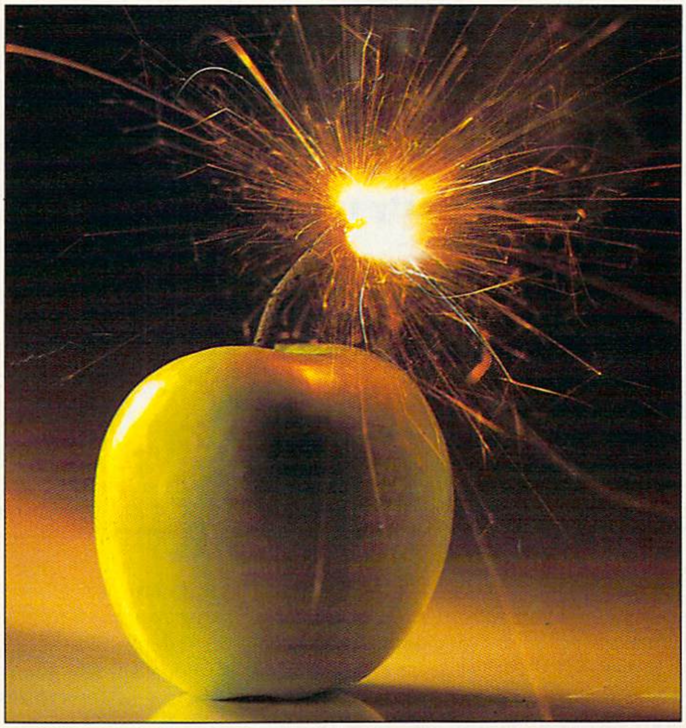
Turn up the Feedback

The last point brings up another important matter. Where do you look when speaking? Many people tend to look at the first row of the audience, or only at certain people they know well. Others rely on something they were told to do in high school; that is, they look past the audience, over people's heads—speaking, in effect, to the back wall. On the surface, this technique seems effective because you don't actually have to look at anybody—great if you are nervous—while appearing to make contact somewhere in the audience. Unfortunately, everybody can tell that you aren't looking at anything but the wallpaper. It lacks—and here's that ►

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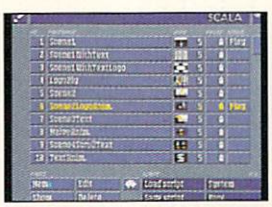
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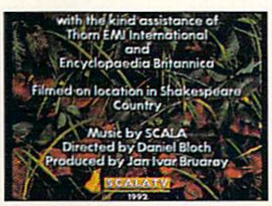
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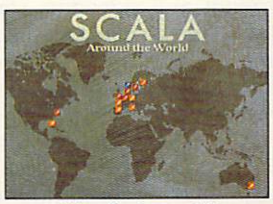
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magic word again—sincerity, which is how you bond with your audience and get the message across.

The best approach is simply to look at the people you're addressing. Look at their faces and into their eyes. *Make eye contact.* And don't just look at the first row, or at your friends in the middle. Look at everybody, by moving your head from time to time. Get the front, back, and corners; don't leave anybody out. There are several benefits to this. First, people tend to listen better when they have eye contact with the person speaking to them. Second, they are less likely to doze off during the presentation if they know that the speaker is looking at each individual member of the audience, even if it is for only a few seconds at a time. Finally, if you *are* nervous, looking at people actually helps. If you establish eye contact with someone, they are almost certainly going to give you positive feedback—small nods, smiles, and so forth. This feedback will put you at ease a lot faster than staring at the back door or your notes.



"Reading directly from notes has its own pitfalls...if you're looking down at your index cards, you aren't looking at your audience."

How else can you foster feedback with your audience? One obvious way is to simply ask them questions. There are several kinds of queries, the most common of which are rhetorical, directed, and reverse. The rhetorical question needs little explanation, except to say that you should strive to make the question clearly rhetorical. Otherwise, you open yourself up to the possibility of having someone else answer your own question, thereby derailing your train of thought.

Directed questions are generally the most useful. They can be directed to an individual whom you think is likely to know the right answer, or to the audience in general. Be sure, though, to give the recipient sufficient time to think and respond. What seems like an eternity on stage is often less than a few short seconds. If you don't believe that, stage a practice speech with some friends and videotape yourself. You'll be surprised at how often you cut off a potential respondent after only a brief moment because you were sure time had been dragging on to embarrassing lengths.

Finally, the reverse question, if applied with tact, can be a very effective means of drawing the audience into an active role in the speech. If someone were to ask, "I still don't understand why HAM mode creates such fringing," you could lead them through the solution step by step, asking them such questions as, "How many bitplanes are available in a lo-res screen?" If you get the questioner to come up with the answers himself, so to speak, not only will that person understand your point better, but so will others in the group who were also confused but didn't ask.

PRE-FLIGHT CHECKLIST

The final items that need to be addressed are your visual aids themselves. Leave nothing to chance, particularly if you are delivering a presentation to your boss or to potential clients. As a general rule, friends at a users' group meeting will tolerate some technical glitches, but people who are paying you won't. There are several things you should do.

First, don't ignore the obvious: Spell check everything! Nothing will damage your credibility faster than an introduction screen proclaiming in bold Kara fonts, "Today's Topiks:".

Next, limit the text on any one screen. Split verbose screens up into multiple entries, as dense text is difficult and distracting to read from a distance. On the same note, font size and style are critical. If you are going to output your slides on a television, don't use fonts smaller than 20-point size or those with single-pixel widths. They'll get lost in the video. Be sure to test your slides in the actual presentation hall, lest you discover that even your 30-pointers are too small to be digested comfortably in the rear of the room. As you are probably quite aware, keep an eye on your palette, as well, to avoid those ultra-saturated colors the Amiga is capable of generating. They bleed all over video and look terrible.

If you can, test the presentation ahead of time on the actual system you plan to use. Some inexpensive genlocks aren't happy unless they have a live video feed while they are running; you can discover this beforehand or wait until the start of your speech—it's your choice. Some esoteric video-projection systems even reverse the video image left to right when projected onto a big screen. Preplanning will save your skin. It allows you to judge color saturation, font size, and clarity of graphics and animations. And it also gives you an opportunity to scope out the room and decide where to put the television/projection system, where to stand, and how you can circulate through the room without blocking the audience's view of the Amiga's display.

So, the next time your supervisor, users' group president, or stamp collecting club asks you to put together "a little presentation" with your Amiga for the next meeting, consider yourself armed with not just the world's best multimedia machine, but also with some mechanical knowledge on giving a great speech. A little practice, common sense, and a tiny bit of graphic skill will go quite a long way towards making your next speech a hit. ■

Dave Johnson authored the book ***The Desktop Studio: Multimedia With the Amiga****, and is a frequent contributor to Amiga publications. Write to him c/o* ***AmigaWorld****, Editorial Dept., 80 Elm St., Peterborough, NH 03458.*

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ADVANCED



While some Amiga owners are still trying to catch up with Workbench 2.0, Commodore has forged ahead with versions 2.1 and 3.0 of the Amiga operating system. On the surface, these versions may not look very different from 2.0, but on closer examination, one can see that they represent a substantial level of evolutionary change and refinement. As 3.0 has generated a great deal of interest because of its association with the new AGA Amigas, we'll examine that version first and then follow up with a look at the 2.1 enhancements.

AmigaDOS 3.0, introduced with the A4000, contains all of the features of 2.1, of course, and then some. The main reason that Commodore released Kickstart and Workbench 3.0 at about the same time as 2.1 was to support the Advanced Graphics Architecture (AGA) of the Amiga 4000 and the A1200. While 3.0 contains some non-AGA-related improvements as well, so many of the changes are specific to the new hardware that Commodore has not announced any plans to release a 3.0 upgrade for the A500, A2000, or A3000. For owners of these pre-AGA machines, 2.1 may be the last upgrade, at least for a while.

ILLUSTRATED BY HILBER NELSON

OPERATIONS

Our top AmigaDOS agent

takes you "beyond 2.0"

to unravel the secrets of versions 2.1 and 3.0

of the Amiga's operating system.

BY
SHELDON LEEMON

AmigaDOS 3.0

WHAT BENEFITS WILL Amiga owners who join the AGA generation receive from version 3.0 of the operating system? In two words, better graphics. A quick look at the ScreenMode Preference editor reveals some important changes. First, you can set all of the old Workbench display modes to a maximum of 256 colors out of a palette of 16.7 million, including the various SuperHiRes and Productivity modes, which on an ECS machine can display only four colors out of 64. Second, there are a couple of new monitor types, DBLNTSC and DBLPAL, which provide a 640x400 and 640x512 noninterlaced display on VGA-compatible monitors. These modes are similar to the 640x480 Productivity mode, but provide a larger overscan area.

The drawback to using new noninterlaced modes instead of deinterlacing the old modes the way the A3000 did is that you somehow have to get your programs to come up in one of the new modes. Programs that run on the Workbench screen don't present any problem, but those that open their own custom screen aren't likely to support the new modes yet. Until applications "learn" about the new modes, there is a setting in the IControl Preference editor that can offer a helpful workaround. When you turn on its Mode Promotion button, applications that open interlaced screens will get the "scan-doubled" noninterlaced equivalents, unless they specifically ask for interlaced by using a new Mode ID. Also of assistance here is ►

DoubleX, a public-domain utility program that goes even one step further, converting all requests to open an NTSC or PAL screen into a request to open the "doubled" equivalent.

Even with all this help, however, you still cannot set up a new A4000 or A1200 system with just a VGA monitor because the default graphics mode is either NTSC or PAL—neither of which will display on such a monitor. Also, you will not be able to play self-booting games or use the boot menu (described below) on such a system, because they also use the default graphics mode.

Another way in which 3.0 helps to promote display compatibility is with new boot-menu items. The boot menu appears when you hold down both mouse buttons as you turn the computer on. The 3.0 boot menu has a Display Options section that allows you to choose which graphics chip set to emulate: "Original," "Enhanced," or "Best Available" (which in the case of the current A4000 or A1200 means "AGA"). By default, the chips power up in Original mode to help provide compatibility with programs that are not AGA-aware. The boot menu also allows you to select PAL or NTSC as your initial graphics mode, which finally provides an easy way for North American Amiga owners to boot in PAL mode in order to play European games.

More AGA Enhancements

In addition to the ScreenMode editor, other system programs have been updated to support new AGA features. The Pointer Preference editor now supports hi-res sprites, allowing you to use a much smaller mouse pointer than the rather large default one. The program also allows you to load images from and save them to the Clipboard. The WBPattern Preference editor allows you to use an IFF picture file as the background that appears behind the Workbench window (this is known as "wallpaper" in Microsoft Windows). And the Printer device and printer driver files have been updated, allowing you to print pictures created in the new eight-bit HAM mode, which can display up to 262,000 colors at once.

With 256-color Workbench screens and a 16-million color palette now available, the Palette editor obviously needed an overhaul, and Commodore has responded in a manner that paves the way for future graphics enhancements. Instead of the old red, blue, and green sliders, the new Palette editor provides a color wheel that lets you pick the shade, and a luminance slider that lets you choose the brightness of that shade (a common method for selecting 24-bit colors).

More significantly, the Palette editor allows you to select colors for a maximum of only eight color registers, even if you've set your Workbench screen to 256 colors. This was done to help implement a new palette-sharing scheme, which will allow several applications to appear on the Workbench screen (or other public screen) at the same time, each using its own color scheme. Instead of asking for a particular color register, an application may simply ask for, say, the closest color to a particular shade of green. Allowing applications to ask for colors, rather than hardware color registers, is just one of the steps taken in 3.0 towards a retargettable graphics (RTG) system. When RTG is fully implemented, perhaps in AmigaDOS 4.0, conventional applications will be able to run on special display boards, such as DMI's Vivid24 or Centaur's Opalvision, without requiring a new version of the software for each board.

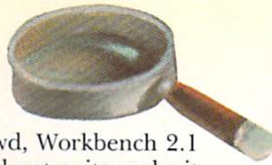
And on Other Fronts . . .

Aside from its AGA support, Workbench 3.0 also moves the Amiga operating system more firmly into the object-oriented camp. There's a new Classes drawer to hold files that support standard object-class types, and a Datatypes drawer to hold files that provide a standard method of dealing with various data objects. This means that in the future, applications programs will be able to ask the system to help them read and write a wide variety of data files, without each program having to implement support for all of them individually. It will also make the Clipboard device more useful, since every program will have an easy method for displaying the contents of a clipboard.

The prime example of this type of application is MultiView, a new "display" program in the Utilities drawer that replaces More (the old text viewer), Display (the old graphics viewer), and AmigaGuide (the old hypertext viewer), and also acts as an IFF sound player. The ability to handle all of these types of data is not actually built into MultiView; when it receives a request to deal with a particular type of file, it passes that request on to the appropriate datatype object. This means that as developers come up with additional datatype files for different types of data (such as ANIMs, for example), MultiView will be able to display these files, as well.

In the "also-of-interest" category, the new MouseBlanker commodity make that pesky mouse pointer invisible while you're typing, so it doesn't cover up your work. A new directory-caching file system option speeds up floppy disks, but makes them unreadable on pre-3.0 systems. There are even a couple of new CLI commands to make scripts more user-friendly. The RequestChoice command lets the script display a standard requester to accept input from the user, while the RequestFile program allows the script to accept a filename from the user by displaying a standard system-file requester.

AmigaDOS 2.1



FOR THE NON-AGA Amiga crowd, Workbench 2.1 adds a number of features that did not quite make it into 2.0 because of deadline pressures. Many of these changes reflect a growing awareness of the international nature of the Amiga. Language localization now allows the user to select the language in which the text of Workbench programs appears. The standard 2.1 version supports English, French, Spanish, Portuguese, Italian, German, Dutch, Swedish, Danish, and Norwegian, and the new system makes it easy for local Commodore affiliates to create versions for other languages also. The language-localization system also makes it easier for independent software vendors to provide multilingual support in their applications.

Easy Iconography

Workbench 2.1 also continues the trend of providing icon-based methods of performing tasks that formerly required the use of CLI commands. The DEVS directory has now been reorganized, with visible draw- ►

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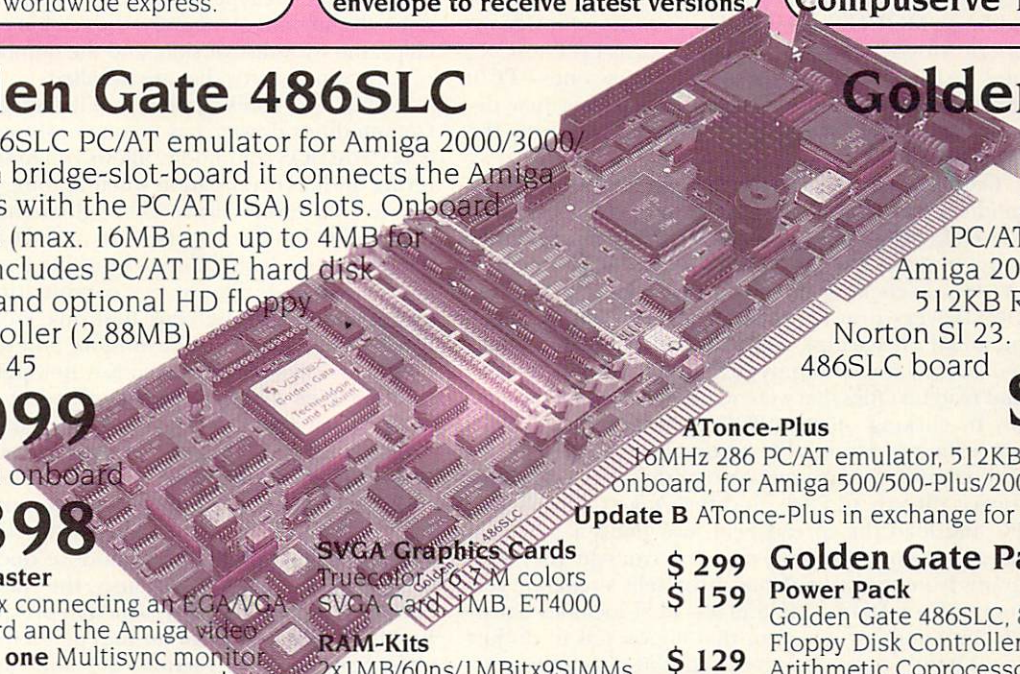
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ers for each of the user-selectable device types: Keymaps, Printers, Monitors, and DOSDrivers. Driver files that are not currently in use are warehoused in the Storage drawer, which has the same subdirectories as the DEVS drawer.

Along with its move to the DEVS drawer, Monitors picked up a trio of new entries in 2.1—Euro36, Euro72 and Super72—all of which provide a higher (70 Hz) vertical refresh rate for less flickering even in interlaced modes. Euro36 and Euro72 are for NTSC/PAL and VGA monitors, respectively, while Super72 provides multiscan monitor owners with an 800X600 interlaced mode (see this month's installment of the "Digging in to DOS" series (p. 55) for more on the new monitor drivers).

The new DOSDrivers drawer allows users to automatically mount optional system devices, such as the recoverable RAM disk, by dragging an icon instead of adding a MOUNT command to a startup script. Icons are provided for existing devices such as PIPE:, AUX:, and RAD:, as well as for a couple of new ones—PC0: and PC1: These last two signal an exciting new development, the integration of CrossDOS into the Workbench.

CrossDOS, an MS-DOS file system licensed by Commodore from Consultron, allows you to read and write MS-DOS disks from any Amiga application as if they were AmigaDOS disks. When you mount PC0: (either by double-clicking its icon or dragging it into the DOSDrivers drawer where it will be automatically mounted on startup), you can insert an IBM-formatted 720K 3.5-inch floppy disk into the internal drive and read text files that were written on it by a PC—simply by clicking on the "PC0:" gadget in your word-processing program's file requester.

Similarly, you can save a spreadsheet in Lotus .WKS format directly to PC0:, and then take that disk to a PC and load the spreadsheet into Lotus 1-2-3. This doesn't mean, of course, that you can run IBM programs from the disks. (Consultron sells a separate version of CrossDOS—5.0; $59.95—that includes Cross-PC, an emulator program that allows you to do just that.) It does mean, however, that you can easily transfer the work that those programs do (the text files, picture files, and other kinds of data files) between the two systems. For large files, CrossDOS can be made to work with IBM-format external hard drives or removable-media hard drives.

Users of 2.1 will be pleased to note that some of the supporting programs have been changed to accommodate the system enhancements. The standard Format program, for instance, now supports CrossDOS disks (just double-click Format and select "PC0:" or whatever other CrossDOS device you have mounted). It also lets you type in volume name, create a Trashcan icon (or not), and select the FastFileSystem or "International" mode, which recognizes filenames with any of the accented characters. Another example of change is the Time Preference editor, which now uses the local time and date format of the country selected by the Locale Preference editor.

More Additions . . . and Deletions

Speaking of Preference editors, 2.1 adds a couple of new ones. The Sound editor allows you to replace the system screen flash (which programs use when they want to signal an error) with either a beep or a sampled sound of your choice. New also is the PrinterPS Preference editor, which lets you control a number of features of the new Postscript printer drivers, including the text font and size, print orientation (portrait or landscape), and graphics imaging.

The 2.1 Tools drawer also sports some new programs. The Lacer program causes the display to be interlaced, regardless of the current graphics mode, in order to provide a more compatible television-style video signal for genlock users, and for those who take advantage of the A600's and A1200's composite color outputs to send Amiga graphics straight to their VCRs. Another new program is PrepCard, which helps configure the expansion cards that fit into the new PCMCIA expansion slot on the A600 and A1200. Finally, the ShowConfig program provides an easy way for the nontechnical users to determine the type of processor present in their systems, the amount of memory, the version of the custom chips, the Kickstart version, and the number and types of expansion boards that are installed.

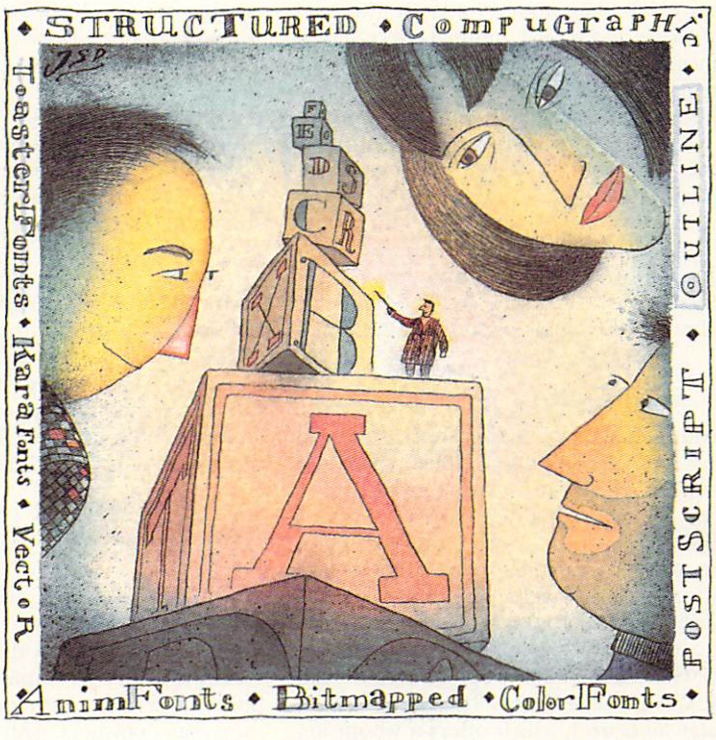
Within the Tools drawer, you'll also find that the Commodities drawer has a couple of new additions. The CrossDOS commodity allows you to select text filtering and text translation when reading and writing files to IBM-format disks. Although not new, the FKey commodity has been updated to include a number of new functions. In addition to inserting a string of text, you can now designate key combinations to cycle through windows or screens; to shrink, enlarge, or toggle the size of the current window; and to run a program or ARexx script. Since FKey now performs all of the functions formerly provided by the IHelp commodity, that program has now been deleted.

Speaking of deletions, all of the changes to 2.1 were not additions. The DiskDoctor command, a disk-recovery program that was both unreliable and hard to use, was removed from the C: directory (the official reason cited by Commodore documentation is "malpractice"). More seriously, the Narrator device and the Translator library, which in previous versions had been licensed from an independent developer, were omitted from versions 2.1 and higher, along with handlers for the Speak: device, and the Say program that resided in the Utilities drawer. Fortunately, the 2.0 versions of these programs function correctly under 2.1, and updating to 2.1 from 2.0 will leave them intact on your hard drive if they were already installed.

WHILE NEW AMIGA models have been making most of the news lately, it is just as important for the system software to evolve as for the hardware to become more powerful. With advances like internationalization, object orientation, and a more open graphics architecture, the Amiga operating-system software has been doing an excellent job of keeping up with progress on the hardware end. No doubt there will be even greater surprises in store as we move towards 3.1 and 4.0. ■

*Sheldon Leemon, a respected authority on the Amiga, has recently finished the fourth edition of **AmigaDOS Reference Guide** (Compute! Books), a guide to using the CLI under operating system releases 2 and 3. He is also the author of a series on AmigaDOS release 2, "Digging in to DOS," currently running in **AW**.*

The ABCs of Amiga Fonts



WHEN THE AMIGA was first released, finding and using fonts with your favorite applications was about as complicated as fooling with alphabet blocks in a nursery school. Since there was basically only one format available—of the single-color bitmapped variety—choosing new fonts was a plug-and-play operation.

Today, finding appropriate fonts for your favorite applications can make you feel like a medieval typesetter rummaging through a dimly lit print shop stacked with hundreds of different drawers of type. Bitmapped fonts are still the most popular fonts on the Amiga, joined by a wide variety of colorful (and often incompatible) bitmap formats. New outline font formats offer superior printed output, but suffer from similar compatibility problems and sluggish operation on slower Amigas. Although astonishing strides have been made in the quantity, quality, and diversity of Amiga fonts, users may now find making sense out of this newfound profusion to be a little confusing.

How can we shed some light on the currently murky state of Amiga fonts confronting uninitiated Amiga users? Armed with some basic font facts and a handful of shareware utilities, Amiga owners can learn to get the most out of their font collections and successfully obtain and use new fonts. In the following sections, we'll briefly discuss and describe each of the major Amiga font formats and how they differ, and also present a few commercial and shareware offerings for each. Finally, we'll reveal a few helpful hints on getting new fonts, using fonts from other platforms, and getting the most out of the fonts ►

Don't let the profusion of new Amiga font formats and technologies lead to confusion. Let's go back to basics and get your "font facts" straight.

By JEFF JAMES

ILLUSTRATED BY JOHN S. DYKES

you already have. (*Editor's Note: In its May and June issues, **AmigaWorld** will follow up the overview of fonts presented here with a comprehensive, two-part "Buyer's Guide to Amiga Fonts."*)



Bitmapped Amiga Fonts

There are basically two types of fonts available for use on the Amiga: bitmapped fonts and outline fonts. Each employs a different technology in the creation of a font.

Bitmapped fonts are the oldest (and still most popular) type of fonts. A good example of a bitmapped font is Topaz, a font that has been bundled with the Amiga since the earliest releases of AmigaDOS. Bitmapped fonts are created by using an organized matrix of dots, with each font size requiring a separate matrix (represented by files for each font size). If you can imagine creating a font by filling in squares on a sheet of graph paper, you'll have a good idea of what bitmapped fonts are all about.

On the positive side, bitmapped fonts are the easiest Amiga fonts to use and have a minimal effect on system performance. Drawbacks to using bitmapped fonts include the degradation in font resolution when the font is stretched, enlarged, or twisted—resulting in jagged edges ("jaggies") and poor print quality. Bitmapped fonts also require a font file for every font size, resulting in a great expenditure of storage space when large number of fonts are involved. AmigaDOS 2.0 added a limited bitmapped-font scaling capability, although the poor print quality of bitmapped fonts remains a concern.

There are three major types of Amiga bitmapped font formats:

1. Standard Amiga Bitmapped Fonts

The most common type of Amiga fonts, standard bitmapped fonts have been used since the introduction of the Amiga back in 1985. Most of the fonts included with your Amiga when you first purchase it are of this variety. Notable among these are the precious gemstone collection of fonts (Topaz, Sapphire, Ruby, et. al.) familiar to so many Amiga users. There are literally hundreds of different bitmapped fonts available, and many of these are offered through shareware and the public domain. One of the more popular commercial offerings is the **Masterpiece Font Collection** ($199.95, ***ARock Computer Software***), which offers a whopping 110 bitmapped fonts in a 20-disk set. Although still the most popular form of Amiga fonts, standard Amiga bitmapped fonts are starting to lose out to ColorFonts for video/animation use, and outline fonts for most printed applications.

2. ColorFonts

A variation on standard Amiga bitmapped fonts, ColorFonts contain additional font information allowing them to make use of up to 16 colors per font. Until the release of AmigaDOS 2.0, you were required to run a small utility before these fonts could be used. Although not quite as widely used as standard Amiga fonts, ColorFonts are perfect for special graphic and video applications. Some of the more popular commercial ColorFont packages are **Kara Fonts—Headlines**, now available in volumes 1 through 4 ($79.95 each, ***Kara Computer Graphics***). A novel twist on the ColorFont standard, AnimFonts, when used with an animbrush-compatible program such as Electronic Arts' DeluxePaint IV, can be colorfully animated. A popular AnimFonts package is **Kara Fonts—AnimFonts 1** ($49.95, ***Kara Computer Graphics***).

3. Miscellaneous Bitmapped Formats

In addition to standard fonts and ColorFonts, proprietary color bitmapped fonts are used by a number of companies—particularly those that produce video-titling software. ***NewTek's*** Video Toaster makes use of such fonts (**ToasterFonts**), as do **Broadcast Titler 2** ($389.95, ***InnoVision Technology***) and **Pro Video Post** ($269.95, ***Shereff Systems***). Most of these packages include a font-conversion utility that allows users to transform standard Amiga fonts into a format usable by that particular program.

Popular third-party font packages for the Video Toaster include **Cinnamon Toast Fonts** ($99.95, ***Shereff Systems***) and **Kara Fonts—Toaster Fonts** ($99.95, ***Kara Computer Graphics***).

Outline (Structured) Fonts

Outline (sometimes called vector) fonts are, more precisely speaking, structured fonts and are created in an entirely different fashion than bitmapped fonts. While a bitmapped font must have a font file for each point size, structured fonts are defined by lines and curves. If you want a new font size, structured fonts can easily be rescaled on the fly to match the size you need. And while bitmapped fonts become distorted when stretched or twisted, structured fonts remain perfectly smooth. The biggest drawback to using structured fonts is their slow speed: Because each structured typeface is defined by a geometric formula, slower machines will have trouble keeping up with the processing power required to display these fonts.

1. Compugraphic Outline Fonts

With the release of AmigaDOS 2.0, the Amiga now offers inherent support for type giant Agfa-Compugraphic's outline-font technology. Popular in both the MS-DOS and Macintosh markets, Agfa-Compugraphic typefaces print smoothly on any output device. This format has the potential to replace standard Amiga bitmapped fonts as the new, default font standard for most Amiga owners. Although using them is still slower than using conventional fonts, the output is far superior. ***Gold Disk*** offers several Compugraphic font packages, including **Publisher Pack** ($59.95), which contains three outline typefaces.

2. PostScript Outline Fonts

PostScript Type 1 and 3 outline fonts are the desktop publisher's fonts of choice on MS-DOS and Macintosh computer systems. Type 1 fonts are "hinted" fonts, which means that the fonts include additional information to help the fonts render crisply at small point sizes. Type 3 fonts lack this information; generally, it's best to use PostScript Type 1 fonts when available. Most Amiga desktop-publishing packages—including PageStream 2.2 (Soft-Logik), Professional Page 4.0 (Gold Disk), and Saxon Publisher 1.2 (Saxon Industries)—have now added support for these fonts, giving Amiga owners access to an incredibly large variety of PostScript outline fonts. ***Soft-Logik*** publishes ►

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several PostScript font packages for the Amiga, including the **Starter Font Pack** ($99.95), which offers eight PostScript typefaces.

3. Proprietary Outline Fonts

A number of Amiga packages offer their own proprietary font formats. Programs such as PageStream and Final Copy II (Softwood) use custom outline fonts that are similar to both Compugraphic and PostScript fonts, but compatible with neither. Again, these fonts offer superior printed output at any type size on any output device, making their use perfect for printed documents.

Alternative Font Sources

If you don't want to spend an arm and a leg to get hold of a new batch of fonts, there are a number of options open to you. Most users' groups and Amiga BBSs offer shareware Amiga fonts. Two of the more accessible font collections I've come across are **Fonts** (numerous authors, ***Fred Fish #81***) and **New Fonts** (Bill Fischer, ***FF #34***). If you're looking for a few shareware PostScript Type 1 fonts to add to your collection, most commercial on-line services—including GEnie and CompuServe—offer a substantial number of fonts to choose from in their Amiga forums. Soft-Logik offers a healthy supply of shareware PostScript fonts for PageStream that can be accessed by calling the Soft-Logik technical-support BBS.

If you can't find the fonts you're looking for, you can always create your own. With **Calligrapher** (now being sold and updated by ***Allied Studios***), you can easily create your own standard and ColorFont format Amiga fonts. If you'd like to try your hand at creating your own structured fonts, ***Soft-Logik's*** upcoming **TypeSmith** program ($199.95) allows users to create and edit structured fonts in Compugraphic, PostScript (Type 1 and 3), and PageStream formats.

If you can't find or create fonts you need, you can make use of a variety of font utilities to access the large number of fonts available in the Mac and MS-DOS markets. A few years ago, using PostScript fonts with your Amiga publishing software required that you purchase the fonts in IBM format and then—using a bridgeboard—manually download them to your laser printer by way of a serial cable. After downloading the font into the laser printer, you would use your desktop-publishing software to recognize the font and then—if you were lucky enough—print your document.

Today, support for PostScript fonts is *de rigueur* in any professional Amiga desktop-publishing application. As long as the PostScript fonts you're trying to use are in IBM format, you can simply download them from a BBS or convert them to Amiga disk format using ***Consultron's*** **CrossDOS** ($59.95; version 5.0—without the CrossPC utility—is now also included as part of Workbench 2.1 and higher), and then use them with your favorite publishing program. PostScript fonts in Macintosh format contain different font information; if you want to use a Mac-format font, you can convert it to MS-DOS format by using the shareware utility **FontConv 1.2** (Gary Knight, ***FF #528***), which readily converts Mac-format Adobe Type 1 and 3 fonts to MS-DOS format.

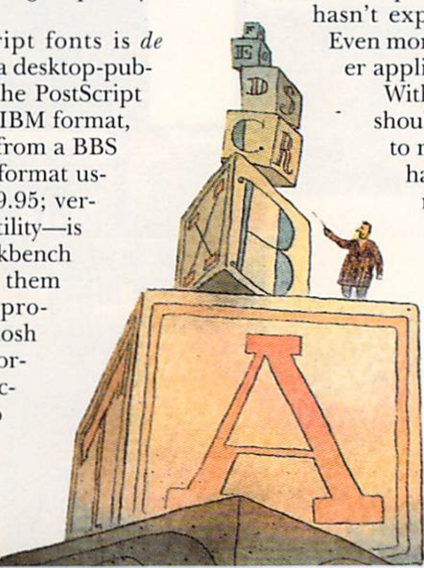
Bridgeboard users can also use **AllType**, ($79.95, ***ATech***) an excellent MS-DOS font utility that converts scalable typefaces to and from most major font formats, including Compugraphic, PostScript, Bitstream, and TrueType. For example, an Amiga user could use AllType and a bridgeboard to convert MS-DOS TrueType fonts to PostScript Type 1, then use CrossDOS to transfer the converted font so it can be used by an Amiga desktop-publishing program.

An older software font-creation package of particular interest to desktop-video users is **Interfont**, now part of **Interchange Plus** ($99.95 ***Syndesis***), which can be used to create 3-D fonts for CAD and 3-D programs. Another font-utility package you may find useful is **Anti-A** ($65, ***Zen Computer Services***), a UK-designed program that can transform your drab, plain-looking standard Amiga fonts into antialiased gray-scale ColorFonts.

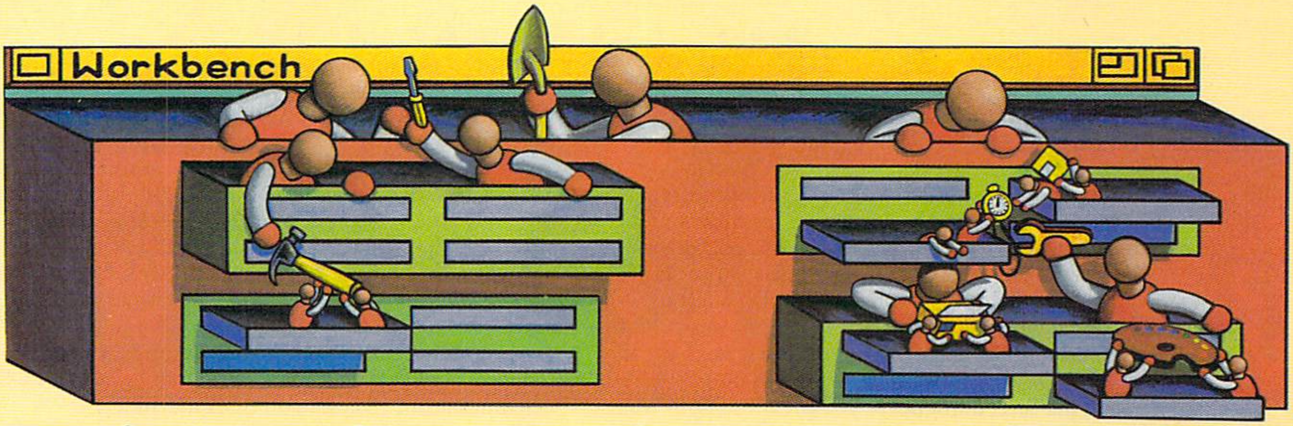
For more technically inclined users, a number of shareware utilities are available for tinkering with font files. The program **PrFont 1.4** (Joel Swank, ***FF #606***) does a handy job of displaying and printing a sample of all fonts in your fonts: directory. Finally, a collection of PostScript utilities in **PSUtils** (numerous authors, ***FF #732***) offers a font disassembler and other useful tools for serious desktop publishers.

When it comes to fonts, the Amiga has definitely come a long way. With support for industry-standard PostScript and Compugraphic fonts, Amiga users will find it easier than ever to utilize Mac and MS-DOS service bureaus. Amiga developers will eventually offer support for the popular TrueType structured font format popularized by Microsoft Windows 3.1 and System 7 on the Mac. Revolutionary new technologies such as Adobe's Carousel (which allows users of different DTP packages to seamlessly exchange documents) and Multiple Master typeface technology (which enables users to customize typefaces to a heretofore unheard of level) may eventually make their way to the Amiga. An Amiga-specific typeface-conversion facility would be the next step, with Soft-Logik's forthcoming TypeSmith serving as an indirect conversion program. Making Adobe's PostScript fonts available specifically for the Amiga would be another positive occurrence, although Adobe hasn't expressed much interest in doing so. Even more Amiga fonts, font utilities, and other applications are on the way.

With the right information, Amiga users should be able to master their font basics to maximize their applications—without having to become professional typographers in the process. ■



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Digging in to DOS

A SERIES THAT EXPLORES THE AMIGA'S RELEASE 2 OPERATING SYSTEM

State your Preferences! The sixth installment of our series reveals new ways to do so under 2.0, 2.1, and even 3.0.

The Font editor we discussed last month is just one example of how AmigaDOS versions 2.0 and higher let you customize the look and feel of your system. Other new Preferences programs allow you to take advantage of new display capabilities in addition to old ones that were not accessible under Workbench 1.3. At least three of the new Preferences editors deal with the size and appearance of the Workbench screen.

The ScreenMode editor provides much more control over the appearance of the Workbench screen than the simple Workbench Interlace on/off button in 1.3 Preferences. Even if your computer has the original Amiga graphics chip set, this editor provides a couple of choices you did not have before. First, it allows you to select the number of colors on the Workbench screen. Instead of the default four colors, you can set your Workbench to memory-saving monochrome mode (two colors), or boost the number of colors to eight or 16 (256 on the A4000 and A1200 model Amigas). Remember, however, that this riot of colors has a price—it uses up valuable chip memory and may slow operations somewhat as well.

Another feature the ScreenMode editor offers all Amiga users is the ability to create an enormous Workbench screen. Normally, the Workbench screen size is the same as the visible display. If you turn off the Default buttons in the ScreenMode Preferences window, however, you can specify larger width and height. Although the theoretical maximum is 16368x16384, you would need 32MB of chip RAM for a monochrome display of this size! Even with the current 2MB limit on chip RAM, you can still easily expand your four-color Workbench screen to over 3000x2000 pixels. You may never need a Workbench even this large, but expanding your Workbench to 800x800 or 1000x1000 pixels allows your desktop-publishing program to display an entire page at normal magnification, which speeds up screen redraws enormously.

Several new features help you navigate these large displays. With the Autoscroll button turned on, the screen moves automatically any time you move the ►

BY SHELDON LEEMON

ILLUSTRATED BY BARTON STABLER

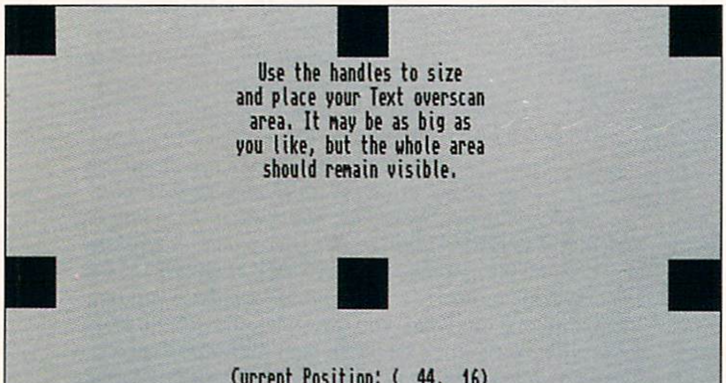
mouse pointer past the visible edge of the screen. Another new feature is "free" screen drag. Workbench 1.3 lets you drag a screen up and down only, and then only by pulling on its title bar. Workbench 2.0 allows you to drag a screen regardless of where your pointer is simply by holding down the the left Amiga key while you move the mouse (the IControl Preferences editor lets you switch this key to Alt, Ctrl, or Shift). If the screen is wider than the display, you can drag from left to right, as well as up and down. Finally, the IControl Preferences editor offers Screen Menu Snap. With this feature enabled, the display window "snaps" to the top-left corner of the screen whenever you press the right mouse button, providing easy access to the menu bar.

Monitor Progress

If your computer has the Enhanced Chip Set (ECS) that was introduced shortly before the A3000 or the Advanced Graphics Architecture (AGA) chips available with the A4000 and A1200, the ScreenMode editor allows you to set your Workbench to one of the new display modes that these chips provide. Only one of these modes, SuperHiRes, works with Commodore's 1084 monitor. Some modes, including Productivity, require either a VGA-style or multiscan monitor like the Commodore 1960, while others, such as Super72 mode, work only with a multiscan monitor.

Because your computer cannot tell what kind of monitor is connected, ScreenMode offers the new modes only if you have installed a monitor driver that indicates your screen is capable of displaying certain types of signals. In Workbench 2.0, you install driver files by moving them from the Monitors drawer of the Extras disk to the Monitors drawer of the Workbench disk. In 2.1 and 3.0, this destination drawer is found in the Devs directory, and spare drivers reside in the Monitors drawer within the Storage directory.

Four monitor drivers—for NTSC, PAL, multiscan, and A2024 monitors—come with Workbench 2.0. The first three offer enhanced capabilities for users with the ECS or AGA graphics chips (the A2024 driver is for use only with a special Commodore monochrome monitor). NTSC and PAL drivers allow European users to set Workbench for the US display standard and vice versa, as long as their monitors can adjust to the slightly different standard (as several versions of the A1084 can). With either of these standard monitor types the ScreenMode program offers new SuperHiRes and SuperHiRes Interlaced modes. These modes double the horizontal resolution to 1280 pixels, with four colors on ECS and 256 colors on AGA machines. With the multiscan driver, ScreenMode offers two new Productivity modes, 640X480 noninterlaced and 640X960 interlaced, again with a maximum of four colors on ECS machines and 256 colors on AGA machines.



Within the Overscan editor, just drag a rectangle—using any of the black "handles"—to change the size and position of your WB screen.

Workbench 2.1 offers even more monitor types for users with ECS/AGA graphics chips and a multiscan monitor such as the 1960. The Euro36 and Euro72 modes have higher vertical refresh rates, which makes for less flicker even in interlaced modes. The screen sizes for Euro36 are similar to NTSC, ranging from 640X200 to 1280X400, while those for Euro72 are similar to Productivity mode, ranging from 640X400 to 640X800. Super72 also has higher refresh rates, but trades horizontal resolution for vertical resolution. The noninterlaced screens are 400X300 or 800X300, and interlaced screens are 400X600 or 800X600.

With Workbench 3.0 (available only on the A4000 and A1200), you get the new DBLNTSC and DBLPAL monitor types. These offer 400-line flicker-free modes, which are similar to Productivity mode but provide slightly greater overscan options. Also, all previous 16- and four-color modes can now display up to 256 colors.

The Bigger Picture

The new Overscan editor provides a standard way to extend the Amiga's display all the way to the edge of the screen. This editor allows you to set two expanded sizes for each screen mode, using a rectangle that you drag around by its "handles." The first, called Text Size, determines the normal working area of your Workbench screen, while the second, Graphics Size, allows applications to determine the total visible area of your screen. With the Overscan editor, NTSC users can expand the Workbench from 640X400 to 724X482, an increase of about 30 percent; similar gains are possible with most other modes. Expanding the width of Workbench to about 680 pixels allows you to display 80 columns of text in a word-processor, even with a scroll bar at the side. Beware, though: Screen-width expansion increases the demands on the graphics processor and may slow processing. Increasing the height of your screen, on the other hand, bears no processing penalty.

While many applications can read your Overscan Preferences specifications and open their custom screens to the same size as your Workbench, relatively few programs "understand" the new screen modes. Many, however, give you a choice of running on the Workbench or on public screens, and thus provide an easy way to access the new modes. There are also public-domain utilities to help you coerce programs into the new modes, but these are partial solutions at best.

Of course, greater compatability is in the cards: Now that the A4000 and A1200 have set a new graphics standard, you can expect future software to be much more graphics-mode aware. That's the strongest incentive yet to upgrade to 2.1 or beyond.

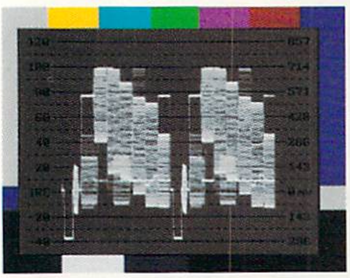
Next month well explore Commodities utilities. ■

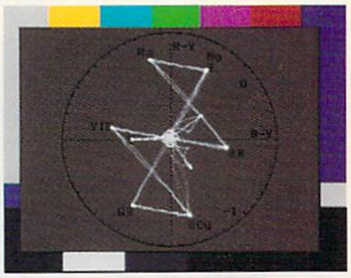


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AW PROFILE: JOEL HAGEN

A RENAISSANCE MAN

This month, *AmigaWorld* has a bit of an anniversary to celebrate: "Accent on Graphics" has reached a milestone—its 50th column (see p. 60). First appearing in the December '88 issue, the column was billed initially as "an occasional series on . . . Amiga graphics." I guess *AW* was hedging its bets—it didn't know that "Accent" would turn out to be the longest running column in the magazine's history. The success of that column is most assuredly due to its author, Joel Hagen.

If you have followed his monthly forays over the years, perhaps you have wondered, "Who is this guy Joel Hagen, anyway?" His picture doesn't even appear with the column. (No, the moustachioed dude in the "Accent" logo is *not* Joel!) The question is not an easy one to answer, especially given how little personal information he is willing to divulge (probably owing to a noticeable absence of ego). Faithful readers and students most likely know him best as the one who encourages them to "*do* try this at home." This fly-fishing, astronomy-loving former anthropology major might be best described as possessing a Leonardo da Vinci-like fascination with art and science and a Hunter Thompsonesque disregard for convention.

Eternal Wanderer

As a child, Hagen and his family moved frequently throughout the Pacific Northwest, finally settling in California. As an adult, he attempted to distance himself from things familiar during the mid-1970s by working as a cod fisherman off the coast of Iceland. When ashore, he wandered around the countryside sketching pictures and getting to know the people. As wandering would seem his birthright, you may just as easily have seen this tall, soft-spoken man discussing the possibility of life in space with fellow astronomical artists on a Crimean spring morning or contemplating a comet's composition while scrutinizing a dirty snowbank on the streets of Brattleboro, Vermont.

When he needs to return to Earth, you may find him in his Oakdale, California, studio seeking inspiration at the keyboard of his Amiga, or sifting through his "filtered clutter." Perhaps he is drawing, or preparing for the computer art class he teaches at a local community college, or maybe hammering out his next column for *AmigaWorld*.

Hagen looks for another kind of inspiration out his window. "I really like the outdoors, to camp and fish, be alone and let all the tensions of the world dissolve away." The studio is located in farm country, but only a few hours' drive from San Francisco. In the distance beyond his window reach the High Sierras. "I like to tell people that I live nowhere, but an hour from anywhere," he explains.

Them Bones

Hagen's interest in paleontology and archaeology inspired a rather unique project. His earliest sculptures took the form of alien fossils. He painstakingly molded these—fish, bones, and sculls—out of ceramic. Making them as realistic as possible, he displayed them in



"Who is Joel Hagen, anyway?" asks Jan Jackson in her interview with *AW*'s "Accent on Graphics" author. From these pictures he sent

In Space and Time

a dry, museum-style exhibit complete with maps of dig sites and tags with scientific names in Latin.

But while exploring the elegant shapes of bones, he took his fictional fossils one step further in a story of alien archaeology through digitized composite images. In what later became known as the "Probe Sequence," a computer-generated video reports landing on an alien world and discovering previously unidentified skulls. Next, the computer ascertains what these beings looked like by reconstructing them. (See "Probing Alien Worlds: Extraterrestrial Video," Mar. '88, p. 33, for more on the Probe Sequence.)

This project also provided a segue into another of Hagen's interests, the Amiga. Relying on an A1000 to create and run the Probe Sequence, he actually used the "premiere" version of The Director software designed especially for that purpose. Up until that point, no Amiga tools in existence could control sequencing and blitter chips in the way required. Hagen turned to his friend, software developer Keith Doyle, for help. When they were ready, Doyle and Hagen packed up a six-command version of the program and took it to a Contact Conference. The fledgling Director impressed the attendees as well as representatives from PBS who picked up the story.

In its tenth year, the Contact Conference is a "pretty eclectic" group of writers and space scientists who discuss human futures and life in space, according to Hagen. He's been an active participant for the past five years, and also has attended artist exchanges in such places as Iceland and the Crimea through the International Association of Astronomical Artists.

Brave New Worlds to Conquer

Hagen was also present for Voyager's Neptune and Uranus encounters at the Jet Propulsion Lab in California. "It was a great experience standing in the Command Center watching images coming up live. We have certainly reached a new stage of evolution of ourselves and of our species when we can put our eyes and ears out there in space."

When it comes to computers and art, Joel Hagen is pretty adamant about letting a computer be a computer. "It's not a fake paintbrush; we should open up its many facets to direct creative use. I don't know how many artists think the way I do," he adds, "but I've always enjoyed programming."

Looking back on the last 50 "Accent" columns, what he finds most gratifying is covering the landmarks in graphics software, such as the emergence of strong animation tools, particularly DPaint's first animation features. He also fondly remembers the advent of Amiga landscape-generating tools.

When asked what he had planned for the future, Hagen paused and politely remarked, "What a depressing idea. I've never planned anything in my life. I can think of nothing more dismal than knowing what's going to happen five years from now." End of story. We'll just have to use our imaginations to guess what Joel will be up to next. ■

—Jan Jackson



us, she seems correct when she alludes to his "possessing a Leonardo da Vinci-like fascination with art and science . . . "



Stop-Motion Animation and Motion Blur

50

A continuing series of tips, techniques, and tricks for creating more imaginative Amiga graphics.

By Joel Hagen

IN STOP-MOTION animation, real objects are filmed one frame at a time. The object is moved between frames to produce a cumulative illusion of motion. Generations of movie audiences—from *King Kong* to *Star Wars*—have been thrilled by this effect . . . and generations of aspiring young Hollywood impresarios have tried duplicating it in the family basement or garage.

Before the advent of personal computers, I used an 8mm movie camera for my stop-motion experiments. A friend and I went so far as to film an epic about his oil-guzzling '52 Buick—erecting a huge bamboo scaffold from which we suspended a 20-foot stuffed satin tongue that lapped out from beneath the hood of the car. Filming went on for days as we inched the car forward between frames, adjusting the tongue for each shot. I haven't lost my enthusiasm for stop-motion, but today I use my Amiga, a video camera, and special-effects software to do the job in new ways.

Capturing Your Cast of Characters

While 3-D software is a wonderful way to build virtual objects for animations, sometimes there is no substitute for the real thing. You might want to animate kitchen utensils dancing out of your cupboard, or your child zooming around the house on a flying carpet. You may be a model-kit hobbyist wanting to see your 1/48th scale DC-3 flying through Yosemite valley. Your Amiga makes these and other "Hollywood" effects accessible.

In addition to your Amiga, you need a video camera and an image-capture device such as Digi-View (NewTek), Framegrabber (Progressive Peripherals), DCTV (Digital Creations), or any other video digitizer. This allows you to store a series of individual pictures as computer images that you can then manipulate in paint, animation, or image-processing software.

As a first experiment, you might try animating a movable character. Toy stores abound with articulated figures, from Ninja Turtles to Barbie Dolls. Fasten the feet to a solid stand near your camera, computer, and lights. Move each joint of the figure slightly between shooting successive frames so the sequence creates a smooth motion. Number the saved frames sequentially as, for example, "turtle.001," "turtle.002," and so on. When you are finished you can specify a number of frames in DeluxePaint's (Electronic Arts) Load Picture requester to load an entire sequence at once and play it as an animation.

You could shoot the figure in a completely staged setting—using miniature buildings, HO railroad details, model cars, and so on. However, you can make deeper use of the computer as a complete special-effects studio. For example, by shooting against a black background, you can clean up each frame easily—isolating the model against a transparent solid color. That, in turn, allows you to composite the model with other images, thus simulating a special-effects technique called a matte shot. For example, the Ninja Turtle could stroll life-size along a digitized photo of your street.

Rigid models such as airplanes and cars can be mounted on black rods and shot against a black background. I often use a plastic "lazy Susan" as a stand—marking the rim and making measured rotations of models when needed. For instance, you could shoot that DC-3 model head on from a fixed camera position, then in a banking-and-turning sequence on the "lazy Susan." It is easy to use the head-on image as a brush in DPaint's Move requester with a negative "z" distance setting to make the plane fly toward you over a Vista Pro (Virtual Reality) Yosemite landscape. Add the bank and turn images, and then use the Move requester to fly off the screen.

Animations like the dancing kitchen

With just a few digitizing, paint, and image-processing tricks, you can create Hollywood-style animation special effects.

utensils will require a little on-the-spot ingenuity on your part to support and control each object. I frequently use hidden dabs of modeling clay to hold things in place for a shot. You can even clean up visible props in a paint program, but this can be tedious. As for the child on a flying carpet, try a rug on a piece of plywood resting on a box. Be sure the child remains still, shoot from a tripod at an angle that conceals the box, and then drag box, rug, and child as one unit from spot to spot for each shot. The child can try incremental actions such as waving.

FLY ME TO THE MOON . . .

The accompanying illustration shows an animation frame in which a spacecraft flies over a snowy alien landscape. The spacecraft was scratch-built from sheet styrene, model parts, and two spark plugs, and then captured with Digi-View. The mountain was generated with Scenery Animator (Natural Graphics), while the moon was painted in DPaint's Shade mode. The spacecraft shadow is a rotated spaceship stamped on the landscape in Shade mode. The sky is a 24-bit "Backdrop" created in Art Department Professional (ASDG). These elements were assembled using Stencil features in DPaint and Composite options in ADPro.

As a final touch, I manually applied motion blur to each frame using Imagemaster (Black Belt). The motion-blur effect was an unfulfilled dream for earlier stop-motion animators. For instance, individual frames from *King Kong* reveal the model in crisp focus even during action scenes. By contrast, a film frame with a person in motion shows blurring. This, in part, is why models in older stop-motion films move a bit jerkily. Modern effects teams can use computer-controlled models to physically blur each frame as it is shot. Amiga animators can perform a little software magic to achieve similar results.

In the illustration, I wanted to preserve the detail of the model, but enhance a feeling of speed and motion. I chose to create a motion blur somewhat like the "zippity" lines animators often add to the trailing edge of a speeding character. In Imagemaster, I selected Motion Blur from under Geometric Transformations in the Process Panel and then used Polygon Area to outline a portion of the rear of the craft—keeping the outline slightly within the area of the ship itself. If the outlined area were to extend beyond the ship, parts of the sky, for example, would blur over the moon—which in this case is not desirable. Choosing a blur distance of ten pixels, I then manually set the direction along the major axis of the craft. The same post-production method could be applied to the child on the flying carpet or the airplane in Yosemite. ■



"Ice Planet" (above) is an animation frame that includes a photograph of a model composited over a fractal landscape. Motion blur enhances the feeling of speed.

Joel Hagen's credits include work in art, astronomy, science fiction, and software development. Write to him at 10512 Sawyer, Oakdale, CA 95361. Please include a stamped, self-addressed envelope for a reply.



Multimedia From Video

Take the Toaster and the IV24 out of the suite and into the board room.

By Gene Brawn

THE INCREDIBLE SUCCESS of NewTek's Video Toaster alerted the video world to the Amiga's power in the editing room. Yet, there is another area where the Toaster and its stepcousin, GVP's Impact Vision 24—two of the most popular video boards on the market—could have as great an impact. Where? Live multimedia presentations. Both offer the millions of colors, real-time transitions, and special effects that your TV-saturated audiences expect.

Using the boards for this purpose is a bit like fitting a square peg into a round hole. Although both come with 3-D rendering and 24-bit paint programs, neither offers software for creating or controlling real-time presentations. So why would you want to bother expanding your board's horizons? For great results, of course, and to further capitalize on your investment. Several software packages provide the power you need for integrating either system into video's new age. But before investigating them, let's make sure your hardware is up to snuff.

Hardware For Multimedia

Most multimedia productions can easily overwhelm a stock Amiga. If the processor is too slow, or there's not enough memory to load large animations, or the hard drive isn't fast enough to retrieve the data in time, your fast-paced program will slow to a crawl. The multimedia Amiga is an expanded Amiga. Don't skimp on hardware; it can make or break your presentations.

The Video Toaster, of course, requires an A2000, and unless your pace is leisurely, you should add an accelerator—preferably a 68030 or '040. Install as much RAM as you can afford; ten megabytes is enough for Toaster presentations, but you will need more if you do much 3-D rendering.

If you plan to incorporate VCR input, you'll also need a time-base corrector for each device. Because the Toaster is not an edit controller, you will have to create your own command software for the video deck. This is not difficult if you can obtain the control codes for your particular deck. All the software presented here can send and receive data through the serial port; some packages include drivers for the more popular laserdisc players and VCRs.

The IV24 is less picky about its host, and any Amiga with a video slot will do (earlier versions do not support the A4000, however). As with the Toaster, use the fastest processor you can to ensure smooth performance. The IV24's RAM requirements are also less demanding than the Toaster's. Five megs should give you a comfortable margin, not including the memory requirements of your multimedia software. And remember, if you plan to incorporate more than one VCR into your setup, you'll need an add-on serial card to supplement the Amiga's solo port.

A fast, high-capacity hard drive is a must for both systems. Bear in mind that RGB images often exceed a megabyte of disk space. It will not take long before you fill even a 100MB drive, especially if you include animations. A compromise is to dedicate the internal drive to the multimedia system and your everyday software, then add a removable-cartridge drive for your projects. This is a good way to keep your presentations organized, and to avoid the hassle of shuffling files on and off the hard drive as it fills.

Back To The Boards

Before you commit to a software package, assess your multimedia needs. And if you don't actually have either board, consider this: A software-controllable genlock may be all you need for simple applications, but most Amiga genlocks accept only one video input. They combine the Amiga and video signals as NTSC video and allow for limited effects, such as simple fades between video and Amiga, or a mix of the two sources.

The IV24 is a big step up from the genlock. This powerful piece of hardware gives the multimedia producer unparalleled video flexibility: The IV24 can accept and output (transcode) every video standard used in North America. This means, among other things, that you won't have to invest in any new equipment, since the IV24 can accommodate anything you already use. The board's 24-bit framegrabber, live digital picture-in-picture feature, and ability to combine video signals, often without time-base correction, provide many opportunities. These include: Amiga-generated titles superimposed on live video; animation and recorded video, overlaid on a high-quality RGB framegrab; and broadcast-style over-the-shoulder video in a window. Keep in mind though that if you want to connect more than two devices and switch between them, you must synchronize each device to a master signal. The IV24 is an ideal solution for com- ►

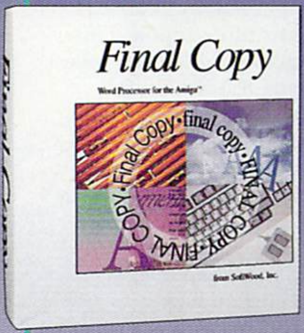
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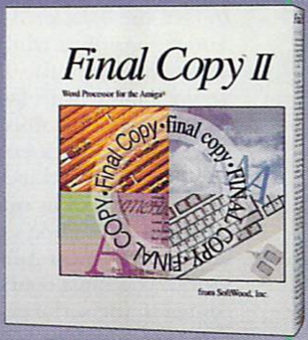
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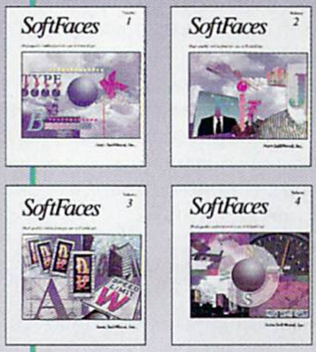
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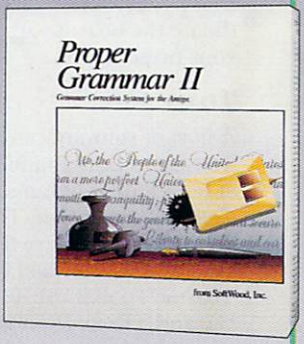
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bining Amiga animations, graphics, or text with 24-bit images or live video.

NewTek's Video Toaster was designed for video production, not multimedia presentations, but because its tools are so impressive, it is hard to dismiss. The Toaster offers many features useful for multimedia: four NTSC video inputs, two NTSC outputs, a framegrabber, two frame buffers, a real-time colorizer, scores of digital effects, a video switcher, and one of the best-looking character generators in the business. If you want great effects, a variety of transitions, and high-quality text in your programs, you can't go wrong with the Toaster.

For all its agility, NewTek's board is not as adept as the IV24 at integrating Amiga graphics into its environment. In fact, the Toaster is "blind" to the Amiga's graphics while the switcher is active. Although the Toaster provides a genlock mode with fades, dissolves, and cuts, the switcher must be shut down before the genlock engages. Additionally, since the board uses the sound channels for some of its operations, audio effects are not always possible. As a result, if you want Amiga graphics and sound, you must connect a second Amiga to the serial port and video inputs of your Toaster system. Anticipating this dilemma, NewTek included a sample ARexx program demonstrating external control of the Toaster through the AUX: port.

Although the IV24 is more Amiga-friendly than the Toaster, both include software better suited for controlling the boards' operations than for providing multimedia pizazz. For instance, neither piece of hardware makes any provision for audio. So, to realize their true power, you need software to coordinate the boards with the Amiga and your presentation.

Toast And. . .

A host of software can adapt the Video Toaster to presentations. Included are at least four programs to automate the Toaster's operation. ToastMaster ($149.95, Byrd's Eye Software), Scriptgen ($49.95, Michael Greenstein), Toaster Toolkit ($150, The Byte Factory), and TRexx Professional. (The latter was recently acquired by ASDG, which, at press time, stated that a revision is underway and pricing is yet undetermined.) Their displays emulate the Toaster interface; you simply click on buttons representing actions the Toaster is to perform. The software then converts these commands into ARexx scripts that, when run, instruct the Toaster to repeat your actions automatically. Nothing could be simpler. (For a review of all four programs, see p. 58, Oct. '92.)

Keep in mind, though, that these four packages are essentially ARexx script generators, not multimedia programs; they add no functionality to the Toaster. Programs designed with these scripters are ideal for noninteractive, stand-alone displays, but little else. If you need more, try a package specifically designed for multimedia. One program, ShowMaker ($395, Gold Disk) provides easy access to animation, pictures, music and sound effects, video recorders, and laserdisc players for powerful presentations. ShowMaker is the first multimedia program to provide direct Toaster control. Still, it cannot hurdle the Toaster's inability to integrate Amiga graphics.

> **"The multimedia Amiga is an expanded Amiga. Don't skimp on hardware; it can make or break your presentations."**

The way around this is to create the Amiga portions of your presentation using ShowMaker, then record them to videotape. (Recording the segments in the order you will need them will save you time shuttling back and forth in search of the next section.) Next, rewind the tape and reroute the deck's output to the Toaster. Now, write a second ShowMaker script to orchestrate the real-time text and effects that the Toaster is to add while the tape is playing. Be aware that ShowMaker has not been updated since its release. This means new Toaster features are inaccessible through ShowMaker and others may no longer work correctly.

An upcoming multimedia program that promises updated Toaster control—as well as savvy sound integration—is Bars&Pipes Professional 2.0 from The Blue Ribbon SoundWorks. For more information on the capabilities offered by that program's new Media Madness module, and for summaries of other multimedia software mentioned here, see "A Show of Strength" on p. 30.

The Impact-Vision Thing

GVP now includes two special-effects packages with the IV24. MyLAD is a small wipe program that uses black-and-white DeluxePaint-style animations to effect moving changes while keying two video sources. Scala has teamed up with GVP to create the second program—a no-frills character generator. While offering limited utility for the multimedia producer, neither program comes close to the Toaster's capabilities. Instead, IV24 users must turn to the likes of AmigaVision (Commodore), Scala MM200 (Scala Inc.), CanDo (INOVAtronics), or ShowMaker.

All four of these programs can talk to the IV24 through its ARexx port. Since these packages send messages in ARexx format, the board does not know the difference and executes the command as if it were from ARexx. In other words, you don't have to be an ARexx programmer to get ARexx results. All these programs feature graphical interfaces, programmable "hot spots," playback of SMUS and 8SVX files, full ANIM capability, and great text handling. Although all are powerful packages, each possesses one or two extra features that make it the most suitable for a particular style of multimedia.

Scala MM200, for example, is excellent for business presentations, primarily because of its elegant typefaces and huge collection of backgrounds, ideal for enlivening graphs and charts.

AmigaVision is a favorite of interactive video makers. Its main attraction is the simple point-and-click method used to create sequences. AmigaVision includes drivers for most major laserdisc players, and a capable database feature.

CanDo is arguably the most powerful. Flexible database commands and an easy-to-use scripting mode for low-level control enable it to tackle any multimedia task. It includes no drivers for VCRs or laserdisc players, however.

Because ShowMaker includes ARexx, MIDI, and Toaster interfaces, it is ideal for live performances where video interaction must be keyed to musical notes. Its one weakness is interactive control: user input is limited to mouse clicks (pausing and restarting a sequence, for example).

Try it!

There are real advantages to using the Toaster and IV24 for presentations, including compatability with almost any video system and color resolutions that outshine the new A4000 and A1200. Now, think of the possibilities for using both boards together... ■

Gene Brawn is a digital animator, graphics designer, and frequent lecturer. His background includes video and multimedia production.

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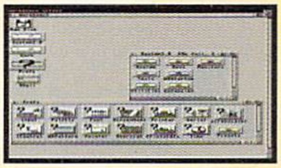
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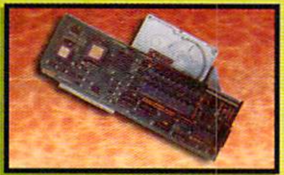
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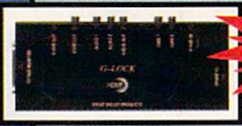
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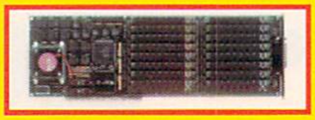
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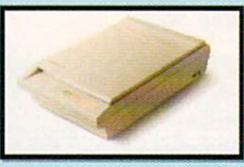


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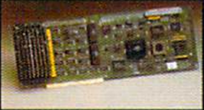
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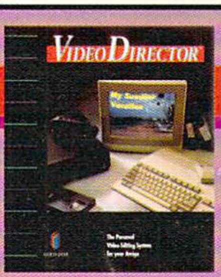
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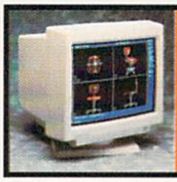
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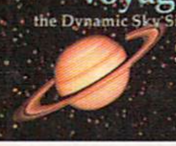
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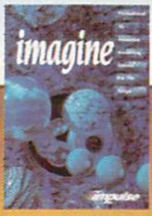


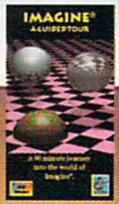
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From p. 28

Editor. A cardboard Quick Reference Guide gives you crib notes on the basic drawing tools, and on-line help is a click away. In addition, when selected, all tools display usage hints in the main drawing window's drag bar.

Art Expression is a good, introductory-level illustration package with intuitive tools and a fair supply of features. It does lack abilities that you expect in a professional program, however, such as support for the Pantone Color Matching System. To Art Expression's credit, several of its drawing and manipulation tools easily let you spend more time thinking and innovating ideas than struggling with the program. The interface is simple and veteran Amiga users will hardly ever have to refer to the superb manuals.

Soft-Logik needs to change very little to take Art Expressions from being good to being excellent. The formula for success is better Bezier control tools, gradient fills, and possibly the Pantone Color Matching System.

—Olusegun Olaniyan

BLITZ BASIC 2

***Acid Software*, $159.**

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Accelerator compatible.
Minimum system: 512K of RAM.
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Basic language for games programming.

The death of BASIC as a programming language has been anticipated for many years now. Professionals shun it, hackers laugh at it, and schools have long since quit teaching it. Still, it won't go away. Recently, Blitz BASIC 2, the latest BASIC incarnation for the Amiga, arrived complete with five floppies, two large manuals, and other sundry goodies. The package weighs about five pounds. If BASIC is dying, it sure isn't of starvation.

But is it getting better? To find out I tested Blitz 2 in three areas: speed, power, and ease of use.

Speed: Out in Front

If speed is the only thing you want out of a BASIC language, Blitz 2 fills the bill. It's a compiled, rather than an interpreted, BASIC. While compiled BASIC does not execute as fast as assembly language, it's definitely a lot quicker than interpreted BASIC. Blitz 2 doesn't stop there, either. With Blitz 2's editor/compiler you can insert C and assembly code into your BASIC programs to speed up sensitive areas. Plus, Blitz 2 offers a special Blitz mode that shuts off the operating system to give you lightning-fast performance.

Of course, there are trade-offs. Debugging is slower with compiled BASIC. With Blitz 2 you cannot simply stop a running routine unless you program in a Stop. Even doing that isn't very helpful: After a Stop you're left in a primitive Direct mode window that allows you to do little other than examine variables.

Blitz mode has more severe trade-offs. When you enter it, you leave behind all the conveniences of Intuition, including keyboard routines, mouse control, windows, and multitasking. The user's guide warns you: "...the only time it's acceptable to close down the Amiga's multitasking environment is with software dedicated to entertainment. Any applications software that uses Blitz mode will NOT be welcomed by the Amiga public."

That statement provides a telling clue to Blitz 2's real destiny—to be a games creator. While it does have the standard window commands, file handling, and control structures, Blitz 2's heart is set on creating entertainment software. Is Blitz 2 fast enough to produce truly commercial-quality games? I think so. The sample games that accompany the program are convincing evidence that Blitz 2 can handle heavy-duty animation.

Power: Commands Aplenty

Blitz 2 gives you access to much of the Amiga's hardware power without requiring library work. All the screen modes—HAM, interlaced, hi- and lo-res (not overscan), and double-buffering—are available with simple commands. ILBM file formats (as from DeluxePaint) are implemented, as well as 8SVX IFF and Soundtracker/Noisetracker sound files. letting you play whole soundtracks in the background. Also included among Blitz 2's more than 300 commands are Rotate (turns a shape to any degree), Stencil (slides objects among different background graphics), VWait (synchronizes graphics with the hardware display refreshes), a series of Gadget commands (simplify putting clickable buttons on the screen), and excellent array-sorting options (Sort, SortUp, SortDown). In addition, you can use CLI commands to pass parameters between your program and AmigaDOS, or you can open the Workbench screen

A few things, however, are noticeably absent. Where are the font commands? Where is overscan? The text and cursor capabilities are not very powerful: How about a simple Home command? Perhaps some screen and file compression?

Ease of Use: Maybe Not

Blitz 2's speed and power are its forte; ease of use is its weakness. The problem starts with the documentation, or rather, the lack of it. Despite the two large manuals, I couldn't locate information on how to paste what you cut in the editor, to break out of a running program, or to enter Direct mode from the editor. Nor could I find evidence of a timer command or what the function keys do in the editor. Worse yet are the cryptic explanations of new concepts. I had a lot of trouble visualizing some of Blitz 2's core concepts, such as bitmap objects, slices, queues, and buffers. I never did quite figure out what the NewTypes variables are all about. Related to this is Blitz 2's somewhat eccentric character. I realize that software evolution requires us to break new ground and sometimes forsake old, familiar turf, but is it really necessary to change the name of the old turf in the process? For example, why "Edit" rather than "Input?"

I didn't like Blitz 2's editing system, either. Pressing the Return key while your cursor is on a line inserts a line below the one you're on. All strings require an end-quote. Auto-indenting doesn't exist. Text scrolling is too fast. You can't delete a line with a simple backspace or delete. The editor is picky about spacing. Hey, maybe it's me that's picky, but all language creators should realize their potential clients are going to be spending most of their time inside the editor. It better be kind.

I did like one holdover from the original Blitz: The right side of the editing screen is preserved for procedure labels you add to your program. Click a label, and you dive directly into that section of code, a great timesaver in long programs. Also, compiling and making icon-executable programs couldn't be easier. A few clicks is all it takes.

Prognosis: Healthy

Blitz BASIC 2 is an improvement over the original Blitz in every respect. It isn't the most powerful BASIC available for the Amiga; it definitely isn't the most user-friendly. But it is a good choice for creating lightning-fast games, and an excellent choice for combining BASIC and assembly language. One thing's certain: Its entry into the fray proves that BASIC is alive and well.

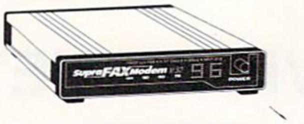
—Mark Jordan

Continued on p. 80

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From p. 76

GOLDEN GATE 486SLC

Vortex Worldwide, from $1099.

A2000, A3000, A4000.
Internal, PC-slot connection.
Installation: Moderate.
Hard-drive-installable software.
Not copy protected.
2.0 compatible.
Accelerator compatible.
Minimum system: 1MB of RAM.
Recommended system: 1+MB of RAM, hard drive, VGA card, and multisync monitor.

25 MHz 80486 IBM PC/AT emulation.

If you need PC compatibility, Vortex has the cutting edge in PC-compatibles today: 486 power. The Golden Gate 486SLC is a close cousin to Vortex's 386SX bridgeboard reviewed last month. Installation for both boards is identical, as are the emulator software and basic features. The CPU, a 25 MHz Cyrix 486SLC, is the most significant difference.

Like the 68040 chip, the 80486 runs very hot. The first board I received sported a massive heat sink above the CPU. The design was adequate in the A2000 and A3000, but the A4000's limited circulation proved injurious to the Golden Gate. When I reported that it crashed frequently from heat exhaustion in my A4000, Vortex responded by placing a fan on all of its new boards. While this solves the problem, I strongly recommend you put the card only in the top slot, where it has the greatest opportunity to breathe.

ROOM FOR EXPANSION

The 486 board comes with 2- or 8MB of memory and expands to 16MB. This is a vast improvement over the default 512K on the 386SX board. Two megs, however, are barely sufficient to run Windows. Consider expanding to six if you run Windows applications often.

The board has sockets for a math coprocessor ($129) and custom floppy-disk controller ($89). If you don't already own a 5.25-inch floppy drive, do you need to purchase the optional controller? Maybe. If you have a high-density drive in your Amiga, the Golden Gate treats it as a high-density DOS drive. If you own only a 880K drive, however, you'll need the controller to read industry-standard high-density disks. If you don't think that's very important, try to find any commercial software that is shipped on 720K disks these days.

Vortex thoughtfully includes an IDE interface on the board, so adding a PC hard drive is as easy as plugging it in. Vortex provides even more flexible storage options, however: You may designate an AmigaDOS partition as the PC hard disk or even create your C: drive out of a single (albeit large) Amiga file on your hard disk. The file method is fast and easy and allows you to back up the PC with any Amiga back-up program. The disadvantage is that it makes a very slow PC hard disk. An AmigaDOS partition is just as fast as a dedicated PC hard disk, but it is messy because you have to reformat your hard drive to create the PC partition to begin with.

I've found the ideal solution is a removable-media Syquest drive, because it lets you use the partition method with your existing Amiga storage system without reformatting all of your previous work. You can add hard disks to the 486 simply by formatting new cartridges, and the Syquest is still available to the Amiga at all times. Additionally, Syquest's SQ5110C is perfect for this task. It reads and writes both 44MB and 88MB cartridges: Now you can tailor the right size cartridge to specific applications like data storage, hard disk backup, and booting multiple operating systems.

LOOKS LIKE A PC, ACTS LIKE A PC . . .

I was very interested to see just how well Vortex's board behaved. Many emulators provide superficial compatibility but falter when challenged. I installed a Super-VGA card, sound card, game port, Windows 3.1, and a slew of Windows and DOS applications. I also tested the Amiga's parallel, serial, and mouse ports while under the Golden Gate's control.

The Golden Gate supported video cards without a hitch; multiple brands worked great. Vortex's MonitorMaster ($148), a software controlled switch box, makes using the Golden Gate on your Amiga multisync monitor a joy.

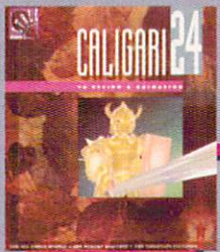
My first attempt at sound, Media Vision's Thunder board, wasn't quite as trouble-free. The emulator would not recognize any of the board's audio interrupts, meaning that while the Thunder board was able to behave as an Ad Lib card, software that looked for a Soundblaster crashed. I swapped the Thunder board for a Reveal Sound FX, which functioned flawlessly. Like many combination boards these days, the Sound FX includes a game port, and joysticks worked great with a variety of games as well.

I had no problems getting any productivity software to install or run properly on the Golden Gate. I felt like I was using a full-fledged PC. Windows 3.1 ran speed-

Continued on p. 84

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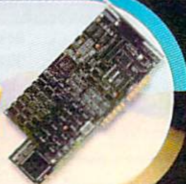


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Circle 13 on Reader Service card.

From p. 80

ily (although the entire system was begging for more than my four megs of memory), both in Standard and 386-Enhanced Mode (which features virtual memory).

Although the Golden Gate doesn't recognize the Amiga's joystick port, it does use the Amiga mouse as a Microsoft mouse after you've installed the appropriate driver. I didn't encounter a single problem getting any software to respond to the rodent, although mouse movement was a bit fast (due perhaps to the speed of my A4000); the slowest setting in Windows was just about right, but in DOS, the cursor was possessed by the "Mouse Accelerator From Hell."

The Golden Gate can use the Amiga's parallel and serial ports. Printing through the Amiga's parallel port was completely transparent in both DOS and Windows. (Under Windows, however, use the LPT1.DOS port or the output garbles.) Both my dot matrix and laser printer yielded gorgeous results with Windows' TrueType fonts. As for the serial port, I found that my SupraFAXModem V.32bis worked just as well under Windows as it did through the Workbench.

I've never been much impressed with PC emulators before, because their shortcomings were emphatic reminders that I was using a hardware hack of limited versatility, not a real PC clone. That is not so with the Golden Gate 486SLC; it performs like a champ. Vortex has thought of just about everything and delivered it in a professional, well-engineered, and affordable package. If you need PC compatibility, this is the one to buy.

—Dave Johnson

G-Force 040 Combo

Great Valley Products, $1899.

A2000.
Internal, CPU-slot connection.
Installation: Easy.

33 MHz 68040 accelerator with up to 64MB of 32-bit RAM and hard-drive controller.

GVP's latest G-Force A2000 accelerator is a new multifunction 68040 card. Operating at 33 MHz, expandable to 64 megabytes of 32-bit RAM, the G-Force 040 Combo combines several expansion features into a single card.

You can populate the board with from 4–64MB of RAM, using 4- or 16MB SIMMs. The 68040's Burst mode of operation is supported (offering faster CPU performance), but only when the board is fully populated with RAM (either 16- or 64MB, depending on the SIMMs used). To enable Burst mode you must remove a jumper on the card.

Modus Operandi

The 68040's mode of operation is controlled via GVP's GVPCpuCtrl utility, which lets you copy the system ROM into the fast, on-board 32-bit RAM (FASTROM). You can also significantly improve performance by using the MoveSSP option, which moves the CPU's supervisor stack pointer to the G-Force 32-bit RAM. The GVPCpuCtrl utility lets you switch back to 68000 mode, ensuring compatibility with older (brain-dead) software. Unfortunately, doing so not only disables the 68040, but disables the on-board memory and hard-drive controller too (as well as other hardware ►

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Circle 34 on Reader Service card.

resources found on the G-Force).

Like most other GVP accelerators, the G-Force 040 has a high-performance SCSI hard-disk controller on board. Able to control up to seven SCSI devices, it has two separate SCSI connections. On the card is a standard internal SCSI connector for devices installed within the computer, while a second external SCSI connection is also available for external devices. The G-Force SCSI uses the same high-performance DMA design of other GVP controllers, with additional disk-speed improvments due to the speed-demon 68040.

Also on board are a very high-speed serial port and a second parallel port. You can configure the serial port with rates as high as 625,000 baud, though a more realistic top rate is about 115,000. The parallel port is simply a second parallel port and operates at the same performance rates of the Amiga's existing port. GVPIOControl and GVPSerial control these extra ports.

Testing the Force

To test the G-Force 040 Combo I placed it in my Toaster-equipped A2000. I tried it with the Toaster's Switcher, Toaster-CG, ToasterPaint, and LightWave. All operated properly and, more importantly, much faster then they did with the 25 MHz 68030 card I used previously. (Note that under some situations the floating-point routines in the 68040 are slightly slower than the 50 MHz 68882 used with some 50 MHz 68030 accelerators. When software is written to take full advantage of the 68040, however, the 68040 cards are faster.)

For a second test, I ran AIBB v5, the standard in benchmark programs for the Amiga. Version 5 offers a report that combines similar tests into a single grouped result, so the numbers more closely represent real-world conditions. Table 1 illustrates the differences among the G-Force, A500, A3000 (35 MHz), and A4000 (25 MHz). Thanks to its 33 MHz processor, the G-Force is much faster than even the A4000 in integer and floating-point operations. Graphics, of course, are slower than on the A4000 (after all, the A4000 has the new high-speed AGA custom graphics chips), and are slightly slower than on the A3000.

The bottom line is that once again GVP is offering a serious accelerator card suitable for the most demanding of applications. While I was a bit disappointed that all features of the card are lost when you reboot to 68000 mode, most people who buy this card won't be running software that requires a 68000 to operate. If you are in need of a really fast accelerator card for the A2000, the G-Force 040 Combo will get the job done.

—Lou Wallace

Table 1: AIBB Version 5 Results

System	Integer	Graphics	Floating Point
A500	21.22	5.95	55.07
A3000	3.26	0.78	3.84
A4000	1.61	0.37	1.30

Note: Values indicate the factor by which the G-Force 040 is faster than the listed system. For example, the G-Force is 21.22 times faster than the A500 at integer operations.

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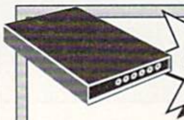
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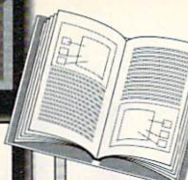
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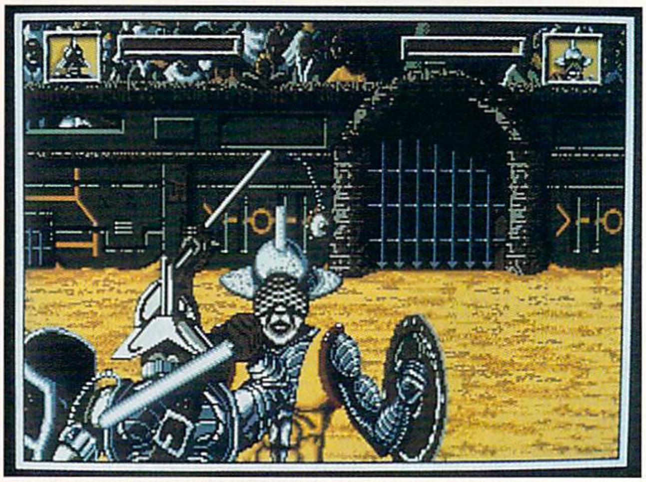
By Peter Olafson

A SCIENCE-FICTION role-playing game, The Koshan Conspiracy (UBI Soft, $59.95) is as big as two barns and deep as a well. In fact, the designers claim it's five times larger than its predecessor, B.A.T.

There's always something different to do—wandering a vast, multipart city, talking at length with the numerous inhabitants (many of whom don't speak your lingo), playing a game within the game, programming a computer within your computer, or just traveling. Traveling is a trip. The game features four flight simulators and a very speedy driving sequence on the city's Via-Express highways. There are also two arcade sequences (versions of Chinese Checkers and Breakout), one board game (a pleasant turn on Pipe Dream), and two types of combat. Along for the ride again is your little computer-cum-wristwatch, B.O.B, which offers a number of helpful functions and its own icon-based programming language for providing new ones. (The language even has—get this—a compiler.) It's much better documented than it was the first time around, and the icons make it far less intimidating to use.

Most of the game is set on the planet of Shedishan, where you begin in the Romanesque city of Roma II. But, let's just say there's even more to the game than initially meets the eye, eh?

Very close to the original B.A.T. in spirit, The Koshon Conspiracy again has been rendered in the style of a graphic adventure, with multiple windows, the shape of the cursor indicating the relevant command, and in the same slightly unwashed graphic style. (Same font, even.)



When in Roma II, watch out for the Romans.

While B.A.T. was fairly compact, however, Koshan leaves the impression of boundlessness. Those graphic windows now scroll left and right. You can have up to five characters in your party, and they have memories that can be added to (and that need to be refreshed). Conversations are far more elaborate, with a host of general areas of inquiry, as well as highlighted keywords (in the style of Ultima VI) that the program then adds to the general list for future use. Characters give detailed directions, there are cultures to assimilate, and the game ob-

Continued on p. 93.

CRIB NOTES By Peter Olafson

Lure of the Temptress (*Konami*, $49.95) starts off in the classic mode: with you in a cell. Nasty place, with no hidden items and no evident ways out save the door, which is very locked. There is that torch on the wall and the straw beneath, however; and last time I looked one plus one still equaled two. Give the torch a tug and then get over next to the door. The guard will soon come in to put out the resultant blaze, and you should take this opportunity to nip out. (Be sure to lock the door behind you or he'll follow you.)

Now you can explore the rest of the dungeon at your leisure. For starters, talk to the prisoner chained to the wall. He doesn't have much to say yet—he wants water first—so you'll need to find him a sip of something. There's not much else you can do in here (not yet, at least), so head into the Guard Room. You'll need the knife atop the barrel and the bottle (the stuff of which drinks are made). And take a look at that sack, eh? (For a nonrequired bit of fun, take a peek through the grate in the left side of the wall.)

Next stop is the torture chamber. Use the knife to free Ratpouch—the guy on the rack—and you'll make a friend for life (or at least for three disks). He'll follow you everywhere—including back to the room outside your cell with the chained prisoner. Give the prisoner the drink, and he'll tell you about a certain section of wall and give you directions before he breathes his last. You're too weak yourself to be doing much wall pushing, so it's convenient that your obedient servant Ratpouch is lingering about to do your bidding. (Bear this in mind later in the game; it may save you some time.) Off you go into the sewers with a neat little animated sequence. It's apparently a one-way trip, by the way, so you may want to save your game first.

This would be a good spot to start making your map of Turnvale. It's not huge, but there are lots of similar-looking locations. The best approach is simply to follow the prisoner's directions and seek out Luthern the blacksmith. His digs are roughly to the north and west. (You'll probably hear him at work before you see him.) Take the tinderbox, and be sure to have a chat with Luthern before you leave.

Now's as good a time as any to learn the lay of the land, so make like a tourist, wander around and question everyone about the missing girl (name of Geowin). You may have noticed that you're not accum-

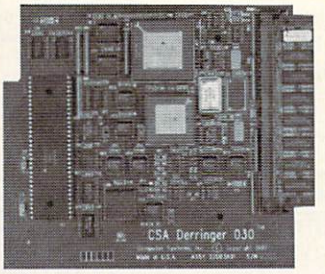
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From p. 90.
jectives are pleasantly sophisticated and grown-up. (You'll start out trying to gather enough property titles to claim the precious echiatone deposits.)

I think you'll enjoy exploring Koshan. It would be hard not to. I can't recall the last time I found such a joyful and endless assemblage of entertaining things to do in one place. Ah, variety. You can't beat it. I wasn't bored even once.

On the other hand, I was mighty frustrated on several occasions. The game refused to load fully on my A500 about half the time, and its five disks won't install on a hard drive. The docs claim Koshan supports extra floppy drives, but while the program did, under some circumstances, recognize a disk in df1:, it didn't load from it. It doesn't seem to like—much less use—fast RAM above one meg. Even filling five disks, the Amiga version appears spartan beside the glamorous IBM take, which displays sumptuous colors throughout and some ray-traced animations.

Continued on p. 96.

CRIB NOTES

From p. 90.
ulating many items. That's soon to change. Before long, you'll come across a fellow in green named Mallin. He has an errand for you—a simple delivery—and upon its completion you'll get some moolah and a gem. The moolah is for spending. (Speaking of which, try bribing Markus at the Magpie somewhere along the line.) The gem goes to the barmaid at the Magpie and earns you a flask of ale.

Time to report back to Luthern about Geowin. He'll send you off to see Grub, who's sitting outside the Magpie. Before you go, allow Luthern to drink the ale. (You never know when you're going to need a nice empty flask.) Grub is a talkative bloke, and if you inquire after the dragon, he'll tell you about a wizard and turn over a lockpick. (The latter goes to Ratpouch.) Now, off to the Severed Arms (just north of the blacksmith's) for a chat with the woman sitting by the fire. She knows about the wizard, and will eventually turn over his diary.

Now you're cooking with gas—literally. Read the diary. It'll give you some bright ideas. The wizard's house is off the marketplace, so toodle over there and have Ratpouch pick the lock for you. (Save your game before doing so, as the consequences are, well, unpredictable.) Within, look at the wiz's chemistry set and use the blacksmith's tinderbox to get the gas burner going. When the liquid boils, collect some of it in the flask. Now, get out of there pronto, because a Skorl guard is on his way to turn out your lights.

Head west and north up to Were Gate and have a nip from your flask. (You may be able to pull this off on Middle Street as well, but it's the sort of thing that should probably be performed in private.) Wow! Elvira, eat your heart out. You've turned into Selena the sorceress. Now you have only to head east to Middle Street, where your new form persuades the Skorl guard to let you into Town Hall and convinces the Skorl within to release Geowin.

This is one of the neat parts of the game. Again, it's not required, but it's great fun to stroll about as Selena, talking to the folks you've already dealt with as Diermot. A lot of attention has been lavished on these situations, and it's good for some horse laughs. The potion apparently wears off on its own, but if you've had your fill, just head over to the castle wall—east of Town Hall—and the magic will expire, leaving you as Diermot again.

Have a talk with Geowin. She'll reveal Luthern's plan to unseat Selena, and so it's back to the blacksmith's a third time to learn what he has in mind. He'll ask whether you're in or out. (This is apparently window dressing rather than a story branch; it doesn't matter what you say.) So, hey, be a team player. Tell him you're in. Then go looking for Mallin. I'll just bet he's got another job for you.

Next time: The end of Lure of the Temptress. □

Circle 12 on Reader Service card.

From p. 93.

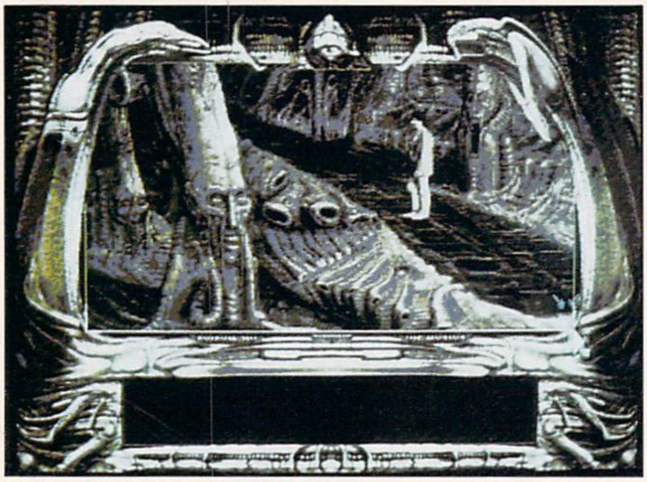
Varied or not, on a couple of levels, the Amiga version got short shrift. A shame.

If you're a fan of Giger's art or a hard-core adventurer, you might enjoy Darkseed. It is a beautiful game, but beauty is only skin deep.

Darkseed

By Rob Lawrence

AS DARKSEED'S (CYBERDREAMS, $69.95) Mike Dawson, a writer who's new to town, you discover your new house contains the portal to a parallel realm that's influenced by your actions in the "real" world. Unless you can break the link between the evil alien inhabitants and your world, it's curtains for everyone.



The neighbors are more than nasty in Darkseed.

Hands down, Darkseed's biggest asset is its graphic quality. The scenes are in hi-res, and the only bothersome flicker is in the message window. The backgrounds' faded, gloomy palettes, together with the suspenseful sound tracks, create an air of mystery. Much of the dark-side scenery is comprised of the half-organic, half-mechanical artwork of Swiss artist H.R. Giger (the designer of Alien). Spot animation also adds life to many scenes, and character animation is quite realistic in many ways. Especially notable is the smooth, perspective scaling; as Mike walks into the background, he gradually shrinks. Darkseed also has many impressive sound effects, including lengthy digitized speech (albiet never coordinated with the character's gum-chewing lip motions).

Gone is the old guess-and-type interaction of earlier games. This may limit your chances to experiment, but the new mouse-driven control saves precious minutes (this is a time-based game) by indicating the immediately usable objects and exits. I was, however, disappointed to find that you have no control over conversation. (Don't turn to the manual with questions; it's useless.)

After many grueling hours, I finally conquered Darkseed. I wish I hadn't; the ending was so stupid that I wanted to cry. The action is often painfully slow, and the game is very linear, allowing for few alternate routes. My biggest complaint? Darkseed is too damn small. For a game that spans seven disks (install it on a hard drive to avoid disk-swapping-induced insanity) and requires a meg of RAM, I'd expect the town to have more than just a police station, a store, a library, and a barber shop that you can't even enter.

Traders

By Peter Olafson

THAT'S ONE STUBBORN M.U.L.E. in EA's stable. It just keeps kicking. The addictive trading game Dan Bunten created for eight-bit computers in the early 1980s has regularly turned up on lists of classics that gamers would like to see reborn on the Amiga.

In the world of commercial games, that's usually just wishful thinking, but this time, someone listened. Merit Software has harnessed a very nice clone from Switzerland's Linel label. And, generally speaking, Traders ($14.95) has the kick of a . . . well, of a M.U.L.E.

It pits you against three computer- or human-controlled "Plubbers" trying to make their fortune on the planet Fat-Star by raising and collecting rabbits, roses, perfume, and water—how adorable—while fending off a landlordly critter named Fat Mike.

Naturally, they're all related—rabbits make water and eat roses, and you need a rose-based perfume to catch them—and so there's a brisk commodities market with a hauntingly familiar mechanism for bidding. All the while, you'll contend with the influence of weather, random events, and Fat Mike (who parcels out land and collects rent). You can also play the lottery and send rockets to other worlds to collect snails—if pirates don't collect your rockets first.

This is just the basic game, too. Traders has lots of options that permit you to tailor it to your liking and ability. (The advanced game, with an elaborate robot battle sequence, sets Traders apart from its illustrious predecessor.) The graphics are functional—not great, but as good as they need to be—and Traders has some of the best game-playing music I've heard.

I can't really complain about the play. It's essentially M.U.L.E.'s, and the parts not modeled on M.U.L.E. show that game's indomitable spirit. But one cautionary note here: One of M.U.L.E.'s great virtues was accessibility; you could pick it up just by playing. Traders, however, is not a good game to learn on line. I tried, and most of the time had little or no idea what was going on. A lot of data gets thrown at you, albeit in a clever format; read the excellent 27-page manual first.

Traders also doesn't come hard-disk ready. References to df0: are written into the code; the program looks for the game disk in the internal drive regardless of where the files reside. You can overcome this easily, if you're semi-adept with a hex editor such as NewZap. (I changed the two df0: references in my back-up copy of TRADERSINTRO to dh0:.) But it's still a nuisance to have to force a game to do something it should have done voluntarily. (Traders does load far more quickly from hard disk.)

Nor does Traders run under 2.04 or 3.0. And the copy protection is unforgiving; one mistake in translating the code and the program declares your program to be "counterfeit." Now isn't that *special*.

Despite quibbles about not being as accessible as the original M.U.L.E., the rigamarole about installing the game on a hard disk, and the frustratingly inane copy-protection scheme, it's still a pretty good game. This stubborn M.U.L.E. hasn't lost its kick. I recommend Traders. Any more at home like you? ►

SHORT TAKES By Peter Olafson

Bill's Tomato Game

Bill's Tomato Game ($49.99) is a natural upshot of Lemmings' success. In this charming and deeply addictive puzzle game from Psygnosis, you guide a grinning little 'mato to an outbound conveyor belt by strategically placing jack-in-the-boxes, trampolines, and fans with the mouse. Succeed, and advance to the next level. Fail—splat!—and experience Bill's Tomato Puree.

You'll love it. The interface is simple point-and-click educational software at its best. The puzzles are the devil's work. By Level 3, you'll be figuring to be done with all 100 scenarios by lunch. By Level 6 you'll be sending out for lunch and swearing that you won't get back to work until you finish just one more. And at 5 PM, you'll still be on Level 6.

A-Train

In A-Train ($69.95), Sim City marries Railroad Tycoon at their accountants' office. This hybrid of railroad management and city planning from Maxis borrows some delightful bits from each game—the amusement parks you'll build even have fireworks shows—but is more bound up with finances and detail work, right down to train departure times. The lo-res mode lends a whole new sense of intimacy to a mass-transit sim that in its earlier incarnation on the IBM seemed rather cold. And picking out the engines will have your nose pasted to the monitor screen like a kid in a toy store. Tougher to master than Sim and Tycoon—it'll take some training—but still rewarding. (Hey, no subways!)

The Legend of Kyrandia

Good lord, what a gorgeous game. The Legend of Kyrandia (Virgin Games, $59.99) is easily the best-looking animated Amiga adventure produced in this country. You'll be hard put to distinguish it from the VGA IBM version (except that this one has much better sound). The colors are thick—look at the shadowing on those trees—the speed is decent to good, and there's something of LucasArts in the font and tone of the Brandons' dialogue. The interface—literally just point and click—is simplicity itself.

Caveat: The game's content is a bit on the antiseptic and child-safe side—the story is very much a fairy tale in the King's Quest V mode—and that will probably limit the audience to the younger set (apart from some meaty maze elements well into the game). But, they're lucky; this is a beautiful piece of work.

Dragon's Lair III: The Curse of Mordread

Dragon's Lair III ($59.95) is the first of the four Dragon's Lair games—the third by ReadySoft—that doesn't draw most of its source material from the original Don Bluth laserdisc game. So it's an encouraging sign that the charm and fluidity of the original animation—still featuring goofy knight Dirk the Daring and blonde wolf-whistle-inspiring Princess Daphne—remain the same. Unfortunately, not much else has changed, including the twin frustrations of the one-note solutions and lack of hard-disk support. Delightful while it lasts—27 scenes' worth—but we had a right to expect more in the wake of Guy Spy.

Diplomacy

The name Avalon Hill does not exactly come trippingly to the tongue when

Continued on p.100.

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MORE SHORT TAKES

From p. 97.

naming the top Amiga developers. But this venerable board-game publisher has shown a real gift for bringing its classics to the Amiga—first with Third Reich and now with Diplomacy ($34.95). A PD version of this Great War-era strategy game has been around for years on the Amiga, but it didn't offer computer opponents. This one does—as many as you need—and they're smart little buggers, too. As in the case of Third Reich, this isn't a graphical or sonic tour de force—and a computer really can't replace the huge human element in the board game—but it's fast and challenging, and it shows off the delightful complexities of the game. (It's also very economically priced.)

BRIDES OF DRACULA

I don't quite know what to make of this weird vampire game from England's Gonzo label (distributed here by Hollyware). On one hand, Brides of Dracula ($29.95) does have some sly appeal. There's a rather neat two-player mode with a split-screen. (You can play as the Count trying to nail 13 brides or as van Helsing trying to assemble his Vampire Destruction Kit.) The graphics are detailed and vivid—the packaging claims 236 simultaneous colors—and the ability to open doors and explore buildings gives the game an adventure cast.

This van Helsing, however, walks like a turn-of-the-century nerd. It probably isn't for pre-teens; there are lots of, uh, picturesque women in here wearing less than Madonna in high summer. (A recurring theme in vampire games: Remember the full frontal nudity in Vampire's Empire?) The game would have benfitted from some fleshing out of a different kind—say, a "search" or "talk" function. A curiosity, at least.

SCHELOBER'S QUEST FOR A BABE

The title and the six-pack belch that introduces the game make this sound sophomoric. The game proper (3DK, $26 money order or $30 COD) is anything but. Schelober's Quest for A Babe is basically Gauntlet with puzzles or a more arcade-like version of Dark Spyre. Either way, great fun, and well-executed fun at that, as you send this little Simpsons-skinned caveman around collecting keys, food, and loot (called bucks and chunks). The levels are many, massive, and often tricky. The pure joystick control is superb. And, naturally, it goes on hard disk.

PALADIN II QUEST DISK: THE DARK ONE

Paladin had The Scrolls of Talmouth. Paladin II has The Dark One (Impressions, $19.95)—a batch of 20 linked quests set in a renewed battle against the unknown-but-still-sinister DO of the title. Admittedly, these scenarios are intended for advanced Paladin characters, but they're a very tough lot, without any much let-up, and it might have been nice to throw in an additional breather or two. (Only one quest is rated easy, eight are rated hard, and three very hard, and that's at the expert level.) Back up those characters, mate. You're in for a fight.

THE NEXT ROUND

LITTLE GREEN-HAIRED MEN—THE LEMMINGS ARE NOT ONLY BACK, BUT THRIVING. IN LEMMINGS 2: THE TRIBES (PSYGNOSIS, $59.99), THE WALKERS, DIGGERS, CLIMBERS, AND BUILDERS ARE JOINED BY MORE SPECIALIZED TRIBESMEN. BEACH LEMMINGS SURF, SPORT LEMMINGS RUN AND JUMP, POLAR LEMMINGS SKI, AND CIRCUS LEMMINGS INFLATE BALLOONS TO FLOAT AWAY. UNFORTUNATELY, THE 12 NEWLY FORMED TRIBES ARE IN TERRIBLE DANGER (AGAIN). CAN YOU SAVE AND REUNITE THE TRIBES FOR THE FINAL EXODUS? (RS# 101.)

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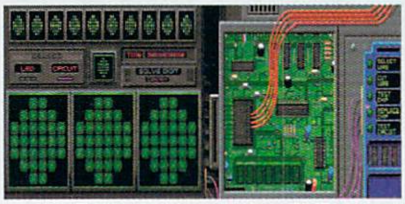
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TSP25: SpaceGames Contains MoonBase a very graphically detailed lunar-lander game, SpaceWar-a two player (either in person or over the modem) space battle. Nebula is a 3D world you must defend..definitely commercial quality.
TSP24: Printing Utilities This disk contains a very nice Banner maker that will use any AmigaDOS font with full-color printing. RobsLabelCreator will allow easy creating of labels for your diskettes. PrintStudio allows easy printing of text/graphic images with total control over page numbering/titling, etc.
TSP19: PacMan Classics Contains Mazeman, Zonix and PacMan87--all great implementations of the origional arcade classic.
TSP14: Plotters This disk contains several of the best mathematical plotting programs available for the Amiga. Includes AmigaPlot--a 3-dimensional mathematical function plotter (pictured), Aplot2.0, and PlotXY



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TSP13: Tetris Games Contains 6 flavors of the classic game "Tetris." Some have artificial intelligence, others a variety of play-styles/skill levels/number of players.
TSP12: ClipArt This disk contains several excellent bitmapped images for use in Desktop Publishing or similar programs.
TSP10: Fractals Scenery (pictured) will create realistic fractal landscapes. Genesis allows the creation of various landscapes with user-definable levels of complexity. Also included are various Mandelbrot generators, including TMandel, Mandel-Mountains and FracGen.
TSP9: Utilities #1 IconMeister—an Icon editor with a complete set of editing/painting tools. TJFormat—a disk formatting program that will format disks that AmigaDOS wont. ChartMaster—a graphing tool that allows you to generate and save different graphs in IFF format. Graph3D lets you visualize complex data in 3-D and save the results. StructGen lets you create gadgets, text, bitmaps and window structures and the program will automagically write the "C" source code for you. LabelMaker is a very easy to use, full featured label printer. DoublePrint fascilitates printing of text files on both sides of paper.
TSP8: Clipart Black & White and colorful clipart for a variety of needs including desktop publishing/video. People, holiday related, school items, scrolls, food, monsters, fish, lobsters, symbols and lots more.
TSP6: 3D Vector Objects #1 Lamp, mirror, bed, chair, fire hydrant, lamp post, street lamp, street sign, traffic light, cannon, cannon supplies, rose, fork, spoon, knife and plate. All objects in Sculpt format.
TSP3: Games 1 Crystal Caverns is an adventure game with randomly generated worlds--you'll never trash the same world twice! Dot2Dot is an adaptation of the classic 2-player connect-the-dot game. PizzaDeliveryMan has you running through the streets to get those pies to your customers. TinyBall is the world's smallest baseball game.

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AMIGA MUSICIANS FLOPPY MAGAZINE

The Disk Magazine for anyone who has an Amiga and likes music!

Whether you're into composing, collecting, studying, or simply enjoying music, then AM/FM has lots to offer. If you want to learn more about using the Amiga as a music computer, then AM/FM is for you. Each disk contains news, reviews, previews, hints & tips, tutorials, new sounds for popular synthesizers, lots of great Amiga music, and the latest sound and music utilities! Each issue contains 2-5 Amiga songs, 2-5 MIDI songs and **4-8 Sound/Music Utility programs!**

AM1: Yamaha util's, MIDI analyzer, ProTimer, 3 MIDI and 4 Amiga songs
AM2: MIDI time tool, Yamaha utilities. 4 MIDI and 4 Amiga songs.
AM3: Roland utilities, ProPlayer (for MODS), 4 MIDI and 3 Amiga songs.
AM4: Roland Sample storage/loader utils., 4 MIDI and 4 Amiga songs.
AM5: Yamaha & Korg Editor/Storage pgms, 5 MIDI and 2 Amiga songs.
AM6: ProPlay 2, MutliRipper, Casio CZ utils. 5 MIDI and 4 Amiga songs.
AM7: Kawai editor, MIDICom, Tracksheet-X, 6 MIDI and 3 Amiga songs.
AM8: MIDItools, music ripper, Promizer. 5 MIDI and 4 Amiga songs.
AM9: Kawai Editors, Thief 3.0, JoinSounds, 3 MIDI and 4 Amiga songs.
AM10: CDTV ARexx control, Playsound, 5 MIDI and 5 Amiga songs.

The AM/FM Sample disks are stuffed full of superb quality samples from the latest and best in synthesizers, drum machines, etc.

SM1: 45 drum & percussion sounds from Roland PCM 10 sound card
SM2: 58 orchestral winds, flutes, brass, saxes, trumpets, etc.
SM3: 30 atmospheric non-instrumental death & horror sound effects
SM4: 32 lead, bass & background sounds from Korg 707 synth.
SM5: 16 rich, full & dynamic Grand Piano sounds, chords too.
SM6: 48 characteristic samples from the Korg Wavestation, leads/bass/effects.
SM7: 53 characteristic samples from Korg Wavestations, leads/bass/effects.
SM8: 46 chords from Korg Wavestation. Pads, choirs, synths etc. Major & minor.

Pricing: AM series disks: $.9.95 each. **Special Introductory offer: Buy 4 and get the 1 free! Buy 7 and get 2 free!!** SM series disks: $7.95 each. AM & SM series disks do not count towards normal (TSP & TC) disk pricing levels.

Surround-Cycles is a high-speed arcade game, based on the light cycle races from the Disney movie Tron.
TSP2: Sounds Animal sounds, musical instruments and many, many more—43 sound samples in all!
TSP1: Maps of USA, Canada and Europe Hi-Res IFF brushes of all 50 US States, 10 Canadian Provinces and countries in Europe. Each map has a 3D extrusion effect with cast shadow.
TC38AB: Galaga is better than the arcade original. Geotime shows the world and where its light/dark. Restaure is an easy-to-use file undeleter. SysInfo shows memory, boards, speed & other system info. VideoPoker will save you hundreds of $$ in a casino. Also includes sound effects & very detailed Impulse object of remote control.
TC37AB: DeluxePacMan is hotter than the arcade game with power-ups and new levels. SubStore allows you to keep tack of your magazine collection. Kwickback will give quick, reliable backups of your hard drive. Also includes 3D Tic Tac Toe, Rolodex to keep track of names/numbers and BeatStomperII--a fun and functional drum machine for your amiga. Also includes 3D object of giant robot & sound effects.

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TC36AB: MachIII will give macros, screenblanker & more to your system. SID and DirMaster are great directory utilities, PrintStudio allows versatile printing of graphics and documents. Degrader gets old programs working with new machines. Amigoids is an incredible asteroids game--totally editable graphics. Plus 3D objects & sounds.

TC35AB: Checkbook Accountant will let you balance your checkbook i 2 minutes! SpaceWar is the classic redone as only the Amiga can do VideoStore tracks your video collection. A-Gene is a family-tree pro gram. MotherLode is akin to the classic Lode Runner. Also 3D object of an A3000 and clipart for publishing.
TC34AB: Optimizer will permanently speedup your hard-drive or flopp disks. LCD Calc is a nice full-screen calculator. BBaseII is a usefu database program. FixDisk will correct many problems with disks BizCalc is a loan analyser. Interferon is a Tetris-type game. Nebula is

SPECIAL EDITION TOOLCHEST

RK1: MegaBall - This disk contains the full-release version of MegaBall, complete with the level editor to create your own challenging worlds to conquer. This game is quite similar to Arkanoid and allows two players with stereo sound and 5 soundtracks! Special RK price, $14.95.
RK2: MachIII - This remarkable utility will allow you to record any mouse click or keypress and play it back as a macro at any time, inside any program. Also provides memory info/clock, alarm, screen blanker, mouse accelerator, mouse-to-menu, sunmouse and window cycling. Special RK price $19.95.
RK3: 3D Objects an amazing collection of some great 3D objects we've ever seen. Running man, spaceships, staircase, hoverboats & much more. Also texture maps to wrap around some of the objects...1.5MB of data in all! $14.95
RK4: Home Manager This program will help you keep track of your life! Complete address book, appointment scheduler, notepad, auto-dialer (requires modem), area-code utility and complete inventory of all your possessions and credit cards. Extremely useful. Requires 1 Meg. $14.95
RK5: Diffusion an Alient terrorists plants a Nuclear Time bomb and you are the only chance of saving the world! Outstanding graphics and sounds complete the mood of this futuristic race against time and devastation! $14.95

3D space game. PicBase will allow you to track all the IFF images yo have. Hate is a great Zaxxon clone.
TC32AB: Computer Coloring Book is a delightful program for children o all ages—comes with 15 pages of pictures to color again and agair Listmaker lets you make, edit, combine and print lists of words—grea for spelling tests! Moresmooth! scrolls text files smoothly on the scree and allows easy printing. Pocket Billiards lets you choose from severa popular pool games with realistic action. Texture allows you to creat manipulate and save (in standard IFF format) realistic fractal texture surfaces. Plague is a monster maze game. Also includes Scree Fader, Snowbench, and FlipBench.

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TC31AB: Calendar Publisher is a professional-caliber calendar mak that is customizable. CrossCircuit is a 1 or 2 player action/logic gam that calls for fast reflexes and thinking. APR is a much-needed print utility. Pizza Delivery Man is a maze game where you deliver pies your neighborhood. Multiplayer is a single program that will let you se IFF pictures/brushes or playback IFF sound samples. Also include RAMgauge, 3-D vector objects and Hi-Res IFF brushes of maps an flags of European countries.
TC25AB: ScreenToIFF captures your screen to an IFF file. PopColo lets you change the colors of your Workbench screen. Warrior is a fu shoot'em-up/adventure game for one or two players. Kaleidoscope is line drawing program. Blockbusters is a game where you get rid blocks by pushing matching blocks into them. Amidemo will show-o your Amigas ability to do solid-polygon animations. Microscope lets yo examine memory at any location. Also includes Hi-Res IFF brushes all 50 states and 10 Canadian provinces, nine digitized sounds and tw small disk utilities and printer utility.
TC11: DiskSalvage will fix corrupted disks and recover deleted file IconMeister is an advanced Icon editor. AlienDuel is a fast, shoot'em-u game. Crystal Caverns is a colorful, graphic adventure game like th arcade game. Also includes an animation, sound samples, 3D dinn table objects, and Hi-Res monster clip-art.

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HELP KEY

New machines, new questions. This time, Tim focuses on important issues surrounding the A4000.

By Tim Walsh

A4000 Concerns

Q. *An A2000, A3000, or A3000T with AmigaDOS 2.1, the Enhanced Chip Set (ECS), a 68040 accelerator, and a 24-bit graphics card makes for a potent computer. Considering this, do the advantages of an A4000 really merit the higher cost?*

A. Those of us who use A4000s on our desks everyday know the price is easily justified. The combination of AmigaDOS 3.0 and the Advanced Graphic Architecture (AGA) chips gives the Amiga a faster, more refined operating system. The 68040 performance, wide array of screen colors, and multitude of display options outshine 2.04 and ECS on all counts.

While 24-bit graphics cards can complement the operating systems of earlier Amigas, the output from the AGA custom chips is an integral part of the A4000's OS. Furthermore, 24-bit cards usually require a second monitor. Even if you purchase an A2000 or A3000 at a garage sale, consider the additional investment necessary to realize A4000-like performance from one of them. Considering all you'd need to buy to approach the A4000's advantages, the A4000 is a good buy.

Q. *How much of my older Amiga software and hardware will work with the A4000?*

A. Conservative estimate: over 95 percent of new AmigaDOS 2.0 software is compatible (at least to the point where it doesn't immediately crash). Lower that to 80 percent or less for pre-1989 games and applications.

Workbench 3.0's ScreenMode Editor lets you select a low-resolution screen to match those required by older software. The freely-distributable program, Degrader version 1.10 (described in last issue's Help Key), like some electronic Jim-Dandy-to-the-rescue, provides various ways to achieve backward compatibility by letting you disable A4000 Cache, Burst, and Fast Memory options when working with older Amiga software. It lets you simply pick and choose from CPU options.

Even without resorting to Degrader, however, most of your ECS/AmigaDOS 2.0-compatible software will work fine. Graphics supported by both ECS and the original Amiga chip set are displayed on the A4000, though some differences in appearance may occur due to display mode variations and your monitor. Also, new versions of programs such as Black Belt's Imagemaster and ASDG's Art Department Professional take advantage of AGA screen modes. Long-time devotees of these programs will take no small delight in the manifold increase in productivity. Graphics cards are no longer required to display 256-color overscan, hi-res screens, such as BMP and GIF images.

New A4000 owners shouldn't hesitate for a moment to copy files from Workbench 2.04 or higher over to AmigaDOS 3.0. With most of my long-time disk utilities and scripts in place, nary a single one failed to perform flawlessly under 3.0. An exhaustive list of Alias commands in my Shell-Startup that minimize typing worked fine, too. They're rarely used, though, since a revamped Tools Manager under 3.0 makes the creation of Tools so effortless that entering commands at the command line almost becomes a thing of the past.

Most hardware that works with earlier Amigas is transportable to the A4000. All manner of video monitors are supported, including multiscan and VGA-type monitors, which plug into the A4000's standard video port with the use of a 15-pin to 23-pin adapter.

In general, external floppy drives, internal and external modems, graphics boards, and anything else that plugs into the various ports and slots work nicely. Woefully missing, though, is the A3000's useful SCSI port, which is not available as standard equipment on the IDE-equipped A4000. Five 72-pin SIMM sockets and four 100-pin horizontal expansion slots give A4000 users two easy methods of adding RAM. Most Amiga users like myself have never seen SIMMs (single in-line memory modules) outside of a Mac. By force of habit, we remove every RAM expansion board from our old Amigas and stuff them into the A4000's 100-pin slots. It may be slow, and it ain't pretty, but it's RAM!

Q. *Is the A3000 obsolete? With Amiga 3000s selling at bargain basement prices, should I buy one, or save for an A4000?*

A. Words like *obsolete* don't spring to my mind in relation to the A3000. Sure, the A3000 is "outdated" by the A4000, but still it offers very respectable performance. With ECS, a 68030, full 32-bit Zorro III architecture, and the 2.04 OS, it's not a machine that's easily outgrown. Pop in a 68040 accelerator and it fairly flies. But, it does fall short in the graphics area compared to the A4000, and even the A1200.

Around the *AW* offices, the A3000 is pretty standard fare; several are fitted with 24-bit graphics boards. With the installation of the 2.1 OS, it moves a bit closer to the A4000. The kicker remains that until someone develops a way to get the custom AGA Alice and 24-bit Lisa video chips to work in the A3000 series, installing Workbench 3.0 on the A3000 is fruitless.

Q. *Will I ever be able to upgrade my older Amiga model to 3.0 and the AGA chip set?*

A. I've heard rumors of adapter boards in the works, but only that—rumors. You can rest assured, however, that the third-party Amiga mavens who did *the impossible* (Kickstart 2.04 and ECS in the A1000) need only time to meet the challenge. Until an adapter board is available for transplanting the AGA chips into the older machines, the only alternative to buying an A4000 is... buying an A1200. ■

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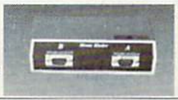
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THE LAST WORD

Kudos, complaints, comments, concerns, and contributions from our readers.

Support Our Troops

The Army and Air Force Exchange Service (AAFES), a Dallas-based department store serving all Army and Air Force bases worldwide, has dropped the Amiga line from its stores. As a result, California-based SoftKat has also decided to drop Amiga software. Now, myself and the other millions of service people stationed overseas are effectively cut off from Amiga computers and software for our four, or more, years of service. We don't want to buy through mail order and pay shipping costs! I have an A1200 and have started a user's group at my base for the many other Amiga users here. Amigas sell well at these stores, so what's the problem? Where's the support for us loyal Amiga users stationed in overseas service?

Luis Reich
APO

First, thank you for being a loyal Amiga user. It is true that the availability of the Amiga in military exchanges decreased for a period of time, not because of sales, but because of a number of changes in the AAFES buying department and some issues that arose between Commodore and the AAFES due to those changes. I am happy, however, to say that we have resolved all of the issues and are moving forward.

The Amiga is currently being sold in the fifty largest exchanges worldwide. The models being sold are the A3000, A600 and A600-HD, and, as of February '93, the A1200.

Thanks again for your loyalty, and I assure you we are working with the AAFES to continue moving forward.

John V. Gray
Military Sales Manager
Commodore Business Machines

Preemptive Strike

Either John Donovan blew it or you misunderstood him when you reported in your February Overscan entry "CyberArts Reveals Amiga Is Positioned for Multimedia" that Donovan said the Amiga uses *cooperative* multitasking. Since its inception, the Amiga's operating system has featured *preemptive* multitasking, not cooperative multitasking as you printed.

Daniel J. Barrett
Amherst, Massachusetts

We Want AGA Cards!

Thank you, Commodore, for revitalizing the Amiga! You finally heard our pleas. AGA graphics should have appeared on the A3000. I bought an A3000 believing it was the "machine for the future," but now I've learned it was a stand-in before the next generation arrived. Now even a lowly A1200 exceeds the A3000 in graphics punch. Hey, how about a little damage control! Why doesn't CBM release an AGA version of the A3000 with a motherboard that will fit into previous A3000s? At least offer us a motherboard upgrade at a reasonable cost. Such a machine, or upgrade, would fit the lineup between the A1200 and the A4000, and it would sure make a lot of present A3000 owners happy. Let's face it, the AGA chip set is the first real change since the Amiga's release; in the past chips were replaceable. Now is the time for CBM to offer motherboard upgrades like Apple has for the Mac line. A3000s are too expensive to just set aside for something new. Maybe an Amiga chip set on a replaceable card is the way to go.

...in the past chips were replaceable. Now is the time for CBM to offer motherboard upgrades like Apple has for the Mac line.

Alan M. Smith
Nova Scotia, Canada

BackUp to Back Off

Thank you for featuring BackUP V3.5 in your article comparing Amiga hard-drive back-up programs ("The Great Amiga Back(up) Off," Feb. '93, p. 49). I would like, however, to point out an error in the comparison chart on pages 52 and 53. In Table 5: Other Features, you incorrectly listed BackUP V3.5 as not being graphics-based, which it is.

Felix R. Jeske
Chicago, Illinois

Unfortunately, the entry "Graphic-based" in Table 5 was misleading. We intended both the "Graphic-based" and "Script-based" entries at that point to be subheadings under "Backup scheduling" to indicate whether backup scheduling was graphic- or script-based. Because we didn't indent the subheadings, it was confusing, and we apologize. We took for granted that the programs mentioned ***all*** *had graphics-based interfaces.—Eds.*

Demystifying dBase

Tim Walsh's Help Key answer to Len Carter's question on using dBase files with the Amiga (Feb. '93, p. 110) seems to me to be overly complicated, and definitely not for the faint-of-heart.

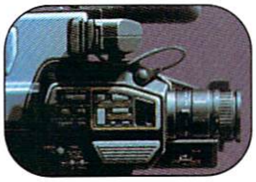
A much easier and more functional method is to use dBMan V from VersaSoft. This product has full read/write compatibility with dBase II, dBase III, and dBase III+ data files, and is also almost entirely compatible with the dBase command language (through dBase III+). So not only can Mr. Carter work on his database and index files at home, but also on his PRG files.

James Closs
Long Beach, California ■

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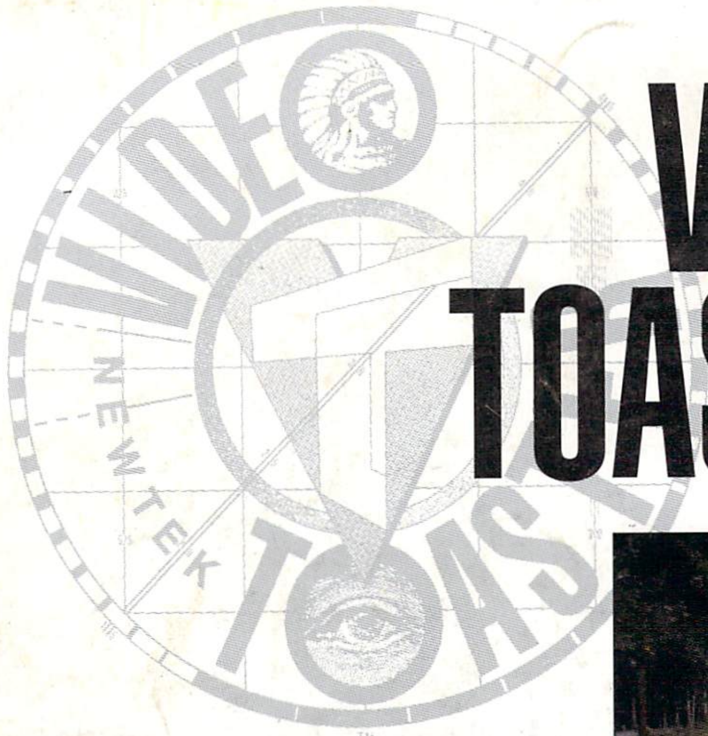
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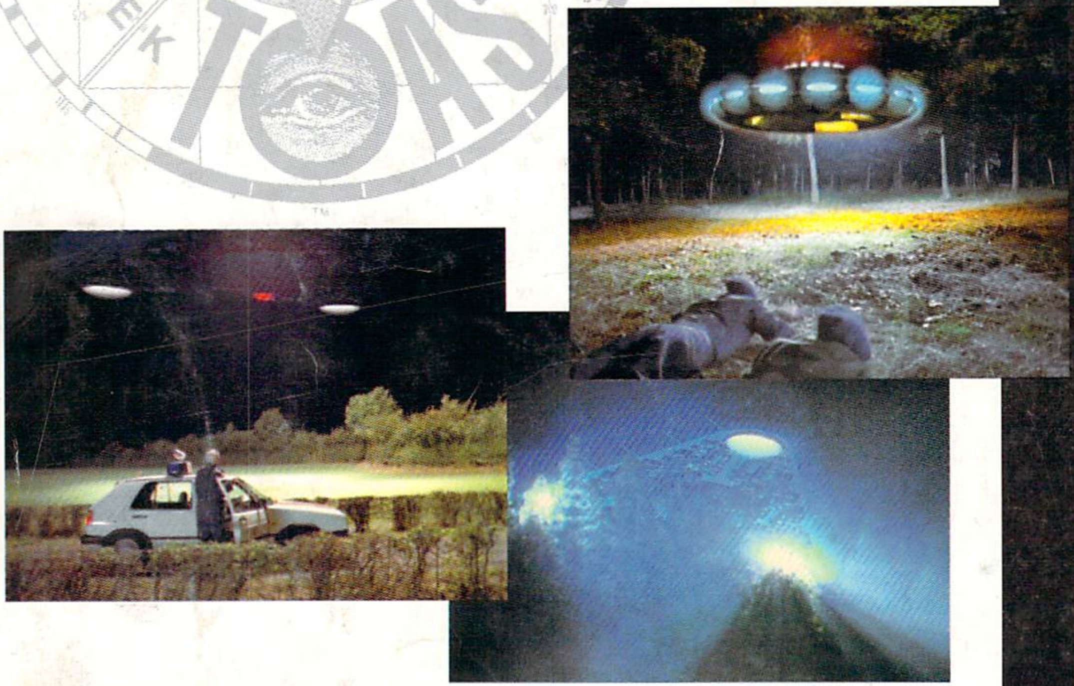
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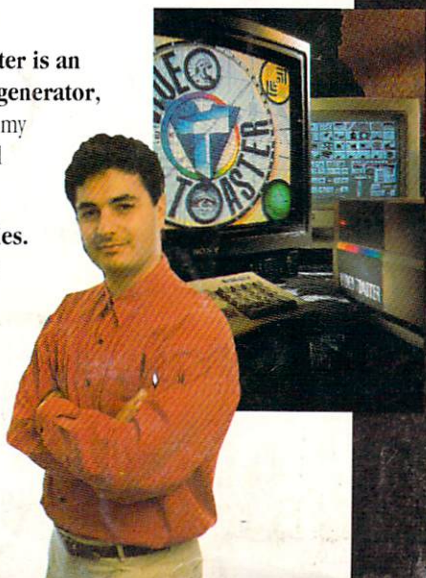


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